HYGEIA

The HEALTH Magazine

published by the AMERICAN MEDICAL ASSOCIATION

$2.50 per year 25 cents per copy

What Is "Sinus Trouble"?

How It May Be Prevented — What to Do for It

The Handicapped Child

What the Parent Should and Should Not Do

Food Fads and Faddists

A Debunking of Some Well Known Diet Theories

Help for the Deafened

Hearing Tests — Lip Reading — Organized Agencies

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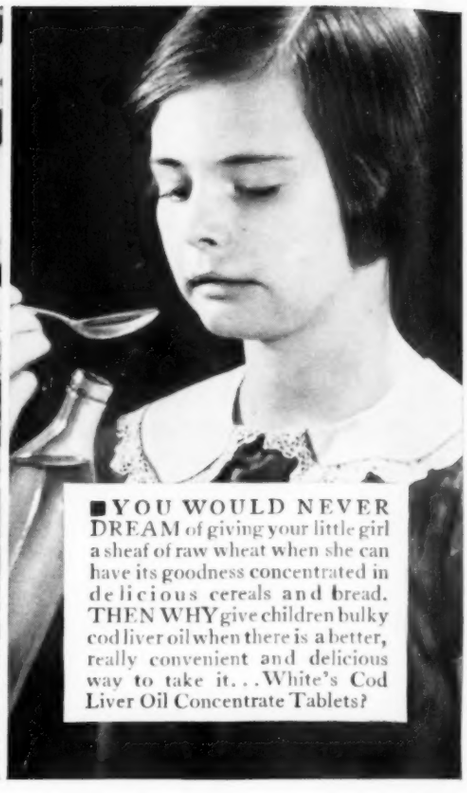
— also —

Common Sense in Mouth Care — Baking Powders as Judged by the A.M.A. Committee on Foods — Dental Dens — The Eye Book — Luring Junior's Appetite — Does Your Child Walk Correctly? — The Head Louse

OCTOBER 1934



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HYGEIA•

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● W. M. Gardner, D.D.S., continues his series on common sense in mouth care. . . . Under the heading, "The Eye Has Its Troubles," Dr. Hyman Cohen discusses optical defects. . . . Doris W. McCray, food consultant, discusses the baking powders that have been accepted by the American Medical Association's Committee on Foods. . . . Nellie G. Herriman adds another incident in the strange life of Ambrose O'Pshaw, detective.

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OCTOBER 1934

Football

IN THE football season of 1931 more than fifty football players died from accidents sustained in the game. As a result, there was a terrific attack on football from all parts of the country. A gradual modification of rules and increased control have led to a great lessening of the number of fatalities and injuries during more recent years. Now there is no longer any question of abolishing football entirely. The educational value of football has become apparent. As Coach Louis Little of Cornell University has pointed out, it is almost impossible to teach a boy courage in the classroom. The best way to teach courage is to create a situation in which courage will be tested. It is also hard to teach sportsmanship in the classroom. Teamwork can be taught, but not to the extent that it can be developed in competitive games.

The chief value of football from an educational point of view lies in the fact that the game artificially creates situations and emergencies in which courage and character are tested. The development of football as a game in which every player cooperates by blocking, by helping with interference and by other plays has made the educational value of the game greater than ever before. Few spectators at football games realize that the guards and the tackles are sometimes more responsible for the great gains made than are the plunging fullbacks and the elusive halfbacks.

Because the actual value of football is recognized today, it is important to minimize the dangers and hazards of the game as much as possible. Some of the leading coaches have written distinctly useful books on the subject. The book by Marvin A. Stevens and Winthrop M. Phelps called "The Control of Football Injuries" ought to be in the hands of every coach as well as every faculty member who is concerned with the control of football in an educational institution.

IN THE first place, proper care of the health of the football player involves not only the gymnasium and the football field, but also the equipment of the player himself and those persons associated with the care of the player. Before any boy engages in football he should have a thorough medical examination. Such examinations need to be repeated during the season and should invariably be made again at the end of the season in order to check up on the effects of the game on the player. A suitable physical examination of an athlete involves not only the ordinary physical tests and examinations of the excretions, but also x-ray pictures of the chest and heart and laboratory examinations of the blood.

Many football players suffer with serious infections of the skin, particularly that of the feet. These infections can be controlled with suitable hygiene and with proper attention to the clothing of the players. Men should never be permitted to play football while they are suf-

EDITORIAL

fering with a severe cold, a fever of any kind or abdominal pain. The player who conceals these things from the trainer or the coach is not only menacing his own life and health, but the success of the team as well. Players with severe injuries should never participate in scrimmage or in a game.

The fact that rest is essential for recovery from injuries of any kind has long been established. When they are injured, few players can render efficient service to their teams, even though the injuries are of minor character. There are, of course, high schools and universities which have small amounts of football material. Under such circumstances, men are occasionally permitted to play with their hands incased in casts, or with broken noses protected by wire splints and masks. Such conditions would seem to carry too far the desire to win.

THE constant difficulty of distinguishing between sportsmanship and smartness as displayed by the quarterback is also a subject for earnest consideration. It is considered smart for the quarterback to notice the physical condition of opponents and to direct enough plays at those who are weakened to force them out of the game. Drs. Stevens and Phelps point out that it is also considered smart for a quarterback, noticing a weakened member on the opposition, to save him until the time when yardage is particularly needed and then to direct the play at him in order to make certain of gain. Real sportsmanship would, of course, involve calling the attention of the opposing captain or of the referee to the player's weakened condition in order that they may consider whether or not he should be removed from the game. Under modern rules, players removed from the game can be returned in any subsequent quarter. Coaches should not hesitate to withdraw a man who requires rest or relief in order to be able to play satisfactorily.

SOME TYPES of injury are much more common in football than in other games. This applies particularly to injuries of the knees and of the collar-bone. Proper consideration to the care of these bones and joints means a great deal for the health of the players concerned.

The book by Walter E. Meanwell and Knute K. Rockne on "Training, Conditioning and the Care of Injuries" is another helpful work for those who are concerned with the care of the football player. It is simple and direct and presents the views of men of long experience in the field.

Modern football has developed a place superior to that of any other sport in American educational life. If it is to continue to hold its high place, it is important that the game is conducted primarily for the good of those concerned rather than with a view to financial return for the institution or its future leadership in football. If the psychologic, moral and health aspects are kept well to the forefront in the minds of coaches, trainers, athletic directors and supervising committees, both the game and those who play it will avoid many unnecessary penalties.

What Is "Sinus Trouble"?

By
WALTER A. WELLS

As Told to
FLORA G. ORR

Sinus trouble? Oh, yes, says the general public, it is one of those fashionable diseases that give people something to talk about.

SINUS TROUBLE? Oh, yes, says the general public, everybody seems to have that nowadays. It is one of those fashionable diseases that is more fad than fact, and it gives people something to talk about besides politics, strikes and the weather.

Merely a fashionable disease is it? Ask the man or woman who has it. You will not have to look far to find some one who knows. In any roomful of people, you will find half a dozen sinus sufferers. Sinus trouble, or sinusitis, is without doubt the most common disease in America today. Doctors estimate that one out of every four persons has sinuses which have been more or less affected by infection at one time or another. Some specialists would put the proportion as high as 50 per cent and say that every other person has, or has had, at least a touch of it. Probably one out of every ten persons suffers so acutely with sinus trouble that he is forced from time to time to seek the services of a physician.

Why have so many persons contracted sinus trouble during the last ten or fifteen years? Why must man suddenly struggle with this new disease, when goodness knows there were plenty of old ones to worry him?

In the first place, of course, sinus trouble is not exactly new. Grandfather probably never heard of it, but nevertheless some of his friends may have suffered tortures on account of it, or even, in rare cases, actually succumbed because of its ravages. From certain accounts written by Hippocrates, who practiced medicine in the fifth century B. C., one can feel reasonably certain that some of the old master's Greek patients had sinus trouble in those days.

Descriptions of the health handicaps under which many famous authors struggled to do their work lead one to believe that these men had nothing more or less than sinusitis. Many an "abscess of the head," "cerebral headache," "sick headache" and many a case of "neuralgia," if correctly diagnosed in the past, would have been labeled sinus inflammation. It is certain that in all these cases the old adage did not hold true that "what you don't know won't hurt you."

Today it is true that the public has become "sinus conscious," and it is also true that sinus inflammation is much more common than ever

before in the world's history. The devastating epidemics of grip and influenza occurring periodically since 1918 are largely responsible for leaving this widespread trouble in their wake.

What are the sinuses, where are they and why are they? They are air spaces hollowed out of the bone, and those in which sinusitis develops surround the nose on all sides. There are in all, eight of them, arranged in pairs; two above the eyes, or the frontal sinuses; two below the eyes, or the maxillary sinuses; two between the eyeballs known as the ethmoid sinuses, and two lying at the back of the nose and at the base of the brain, the sphenoid sinuses.

In the lower animals for which the sense of smell is an important function, these spaces were occupied by extensions of the olfactory nerve and served as a part of the organ devoted to this special sense.

At this point the evolutionists, Charles Darwin and Alfred Russell Wallace, should be mentioned, for as man became man, these branches of the nerve of smell became unnecessary and disappeared, but the hollow cavities in which those nerves were located are still with us. It may even be true that they give us especial trouble, because they are, like the appendix vermiformis, one of the left-overs in man's makeup and of no particular use to him. However, it is not entirely correct to assume that man would be better off without the sinuses. They do, when in healthy condition, allow the voice to be modulated to pleasing tones. Singers and political orators would undoubtedly be poorer without them. Hence we must struggle to keep them in good condition and abandon all thought of being born without them, at least for many generations to come.

The cavities in the bones underlying the eyebrows and framing the upper rim of the eyes are termed the frontal sinuses. The frontal sinus is the one responsible for most of the pain attending sinusitis. It is shaped like an inverted bottle, opening by a narrow neck or canal downward into the nose. As there is this long, narrow passage lined with mucous membrane, the danger of obstruction as the result of a cold is greater with this sinus than with the antrum, or maxillary sinus.

However, the maxillary sinus can also cause much trouble. For that matter, it is more often affected with disease germs than is the frontal sinus. The antrums, left and right, may be felt by pressing the cheek with thumb and forefinger, just bridging the nose. The antrum's opening into the nose is like a simple punched-out hole in the wall between the nose and the sinus; and, unfortunately, instead of this opening being at the bottom of the sinus so that gravity would tend to bring out any secretion in the sinus into the nose, the opening is at the top of the cavity.

Had man not developed into a two-legged animal, walking and running with his head up in the air; if he had remained a four-footed beast with head hanging downward toward the ground, this sinus would drain into the nose much more effectively.

As it is, nature tries to overcome the handicap of making the sinus secretion run up hill. She tries to lead the current of the secretions to this opening, even though it is at the top. She does this through a remarkable arrangement known as the cilia. These are fine, invisible, hairlike processes which cover the mucous membrane of the sinuses and the nose. In the normal, healthy state of the mucous membrane they are in continuous motion, in such a way as to wave or brush all the secretion toward the little opening ever upward. If the secretions are light and thin, they work effectually enough, too; but when the discharge is heavy and thickened by inflammation, these little wavy hairs are unequal to the task, and the sinus becomes filled with heavy, disease laden yellowish matter, a most unhealthy state of affairs.

It is a fact that every head cold is complicated with some congestion of the nasal sinuses, and if a simple cold does not clear up in five or six days, there is a probability that there is some inflammation in one or another of the sinuses.

After all, it is only natural that this should be so, for the sinuses are nothing more than mere adjuncts or adnexa of the nasal cavities proper and are covered by the same mucous membrane. In a head cold, or rhinitis, it is this mucous lining that becomes inflamed; and if the germ causing the trouble is a persistent and virulent one, the inflammation will probably extend on through the openings to attack also the mucous membranes of the sinuses.

Possibly it is not generally known that as the communication between an army and its base of supplies must be kept clear, so must the passage between the nose and its sinuses be kept open. The sinus cavity gets its fresh air through the nose and the sinus opening. Air must get in if the cavity is to remain healthy, and when it is inflamed, the accumulated secretion must have a way to get out. If these accumulated secretions become imprisoned, a bad situation develops. Because germs cause these secretions to undergo decomposition, they are converted into pus. In time, the very bone itself may be eaten away or rotted, and then there is no cure except an operation.

If a cold occurs do not delay in consulting a physician. Waiting too long to go to the doctor may have serious consequences. The important thing is that the germ laden secretion should not be left locked up too long in the sinus interior.

Sinus trouble is no respecter of persons. If John Brown has sinus trouble, and Bill Smith thinks John is just a poor, complaining sort of

fellow, and opines that John's headaches are pretty hard for the neighbors to bear, let Bill Smith beware. Bill may have developed such resistance to colds and germ infections that he will never know from personal experience what John has suffered. Yet even Bill's resistance may be low some day, and some vicious little streptococcus may cause him plenty of trouble; the streptococcus is a micro-organism which particularly delights in getting into the sinus.

Because of abnormal growth conditions in the nose which obstruct the sinus openings, some persons are more susceptible than others to sinus trouble. A deviated septum, for instance, may easily be the mechanical difficulty that is responsible for a case of sinus trouble.

A third characteristic of sinus is that an already chronically inflamed sinus is apparently always awaiting another chance to worry its victim so that he will not forget what an attack of sinusitis is like. Diphtheria, scarlatina and diseases of that type will have their way with you; but when you have come through the woods, you are usually immune to the machinations of that particular bit of germ life which caused your trouble. But a sinus cavity, once attacked by one of the germs that make particular trouble there, is more liable after the attack to be inflamed in the same way again.

That is why doctors see sinusitis as such a serious problem, because every time the patient has a new attack, he is that much weaker to withstand another onslaught. It is a case of a truly vicious circle, which makes it important that the process should be stopped as soon as possible.

What are the symptoms that will enable you to know whether or not you are a sinus victim?

Many persons think that there can be no sinus trouble without pain. That is a great mistake. Only the frontal sinuses produce much pain; these are located in the lower portion of the forehead near the root of the nose. Closing of the canal-like passage between a frontal sinus and the nose usually brings a severe, almost unendurable pain.

Other sinuses may be filled with bacteria laden secretions without the patient being aware of it. He should, however, suspect trouble when a cold is particularly severe and persists longer than it should, when the nose is almost continuously blocked, when there is a discharge of thick, yellow secretion, especially from the back of the nose into the throat, when the head feels heavy and oppressed, and when ambition and alertness are lacking.

I do not like to be an alarmist, but prevention is so much easier than cure that it seems important to sound the warning that if the sinuses are closed and poisons develop there, these will spread through the whole system. Headaches, rheumatism, arthritis, liver and kidney troubles have often been traced to this source.

There is much pessimism, even in the medical profession itself, regarding the cure of sinus trouble once it has fastened its hold on a victim, but there is a brighter side. Even within the last year, new methods of treatment have been developed which seem to promise great advances in the future care of sinus trouble.

Today surgeons almost never resort to the old radical operation, which was done from the outside of the face and which left a bad scar for the patient to carry through life. Such operations have been serious matters especially to women who submitted to the knife used in this way only as a last resort in the hope of getting some relief from pain which was driving them to distraction. If operations must be performed, they are now inside-the-nose work, and there are no scars to show what has been done when they are completed.

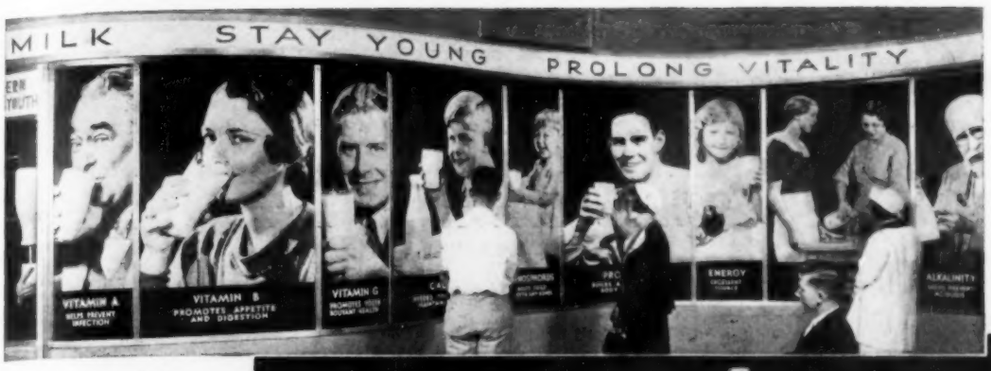
Obviously the sinuses must be drained of their poison when this has collected in the cavities, but something else is necessary; the germs that keep up the disease must be killed.

With this thought in mind, specialists are now using a new treatment, whereby warm, medicated vapor containing nascent iodine is introduced directly into the sinus interior. It has long been known that iodine in its nascent state is the most powerful germicide that exists, but it is only recently that methods have been evolved to produce it in the form of a non-irritating vapor which can be delivered directly into the sinus interior.

After all, the sinus victim is much better off today than he would have been had he lived fifty or more years ago. Then, patients who had this trouble, although they were fewer proportionately than today, had to groan in agony and endure their sufferings with little medical relief.

Just as you may seek to build up your resistance to colds by plenty of fresh air and exercise, by milk and fresh fruits and vegetables in the diet, and by getting plenty of sunshine or taking cod liver oil for vitamins A and D, you may do much by the same methods to avoid sinus trouble. Whenever the body has developed resistance to infection, there is a greater chance of remaining well and strong. Certainly the best way to conquer sinus trouble is to prevent it from beginning.

Colds and influenza, however, are spread in crowds and often attack you even when you have been most careful about fresh air, exercise and diet. It is also true that even if you catch a cold or contract grip or influenza, you can take precautions that the secondary infection of the sinuses is prevented. If, in spite of your efforts, that infection occurs, do not delay in visiting your doctor's office at once. You will be more nearly able to pay his bill as well as to fulfil all your other obligations if he saves you from joining the ranks of the chronic sinus sufferers. Ask the man who is one!



A Century of Progress presents milk, babies and paleontology

MILK

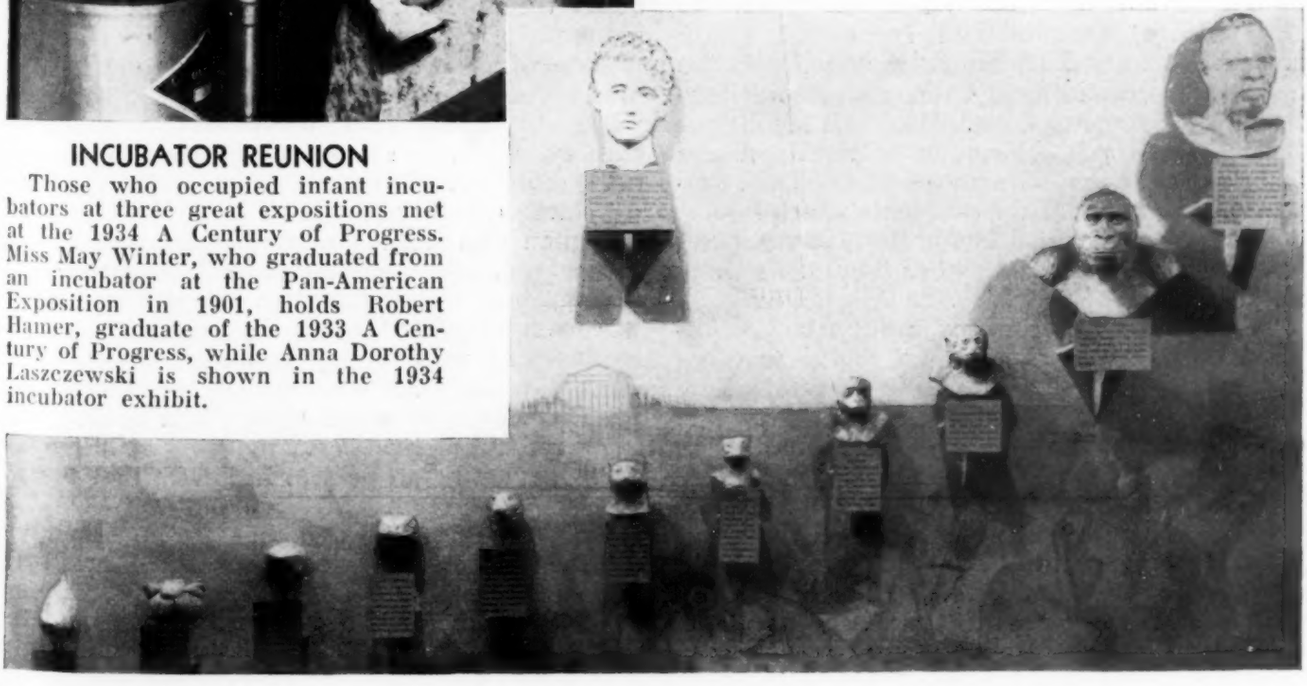
The uppermost picture dramatizes the nutritional elements in fresh, pasteurized milk, and the dioramas below it show a model dairy barn and pasteurization plant.

OUR FACE FROM FISH TO MAN

The progressive steps in the development of man's face are shown in the paleontologist's conception below. From left to right are the heads of the ancient shark, lobe-finned fish, early amphibian, stem reptile, pro-mammal, opossum, lemur, old world monkey, gibbon, young gorilla, Australian bushman and finally the Greek athlete.

INCUBATOR REUNION

Those who occupied infant incubators at three great expositions met at the 1934 A Century of Progress. Miss May Winter, who graduated from an incubator at the Pan-American Exposition in 1901, holds Robert Hamer, graduate of the 1933 A Century of Progress, while Anna Dorothy Laszczewski is shown in the 1934 incubator exhibit.



Man of Tomorrow

An Article in Which CALVIN T. RYAN *Discusses*

Our forefathers took on the tempo of the oxen they used.

WHEN THE National Education Association met in Los Angeles two years ago, a committee from that group analyzed the needs of the average citizen in the modern world and agreed that all persons have certain problems to meet. Health is significant among these problems, for without positive health, man cannot discharge his social functions or meet any of the problems which he has to face. Modern health therefore stresses not how to be less sick but rather how to be more well.

"Maintaining health under the strains imposed by modern conditions," is the wording used by the committee. The implications here are obvious. In the first place, there is the necessity of maintaining health; secondly, it is to be maintained under conditions that are not as favorable as they once were.

Throughout the problem one finds the stress that modern conditions are different from those of yesterday. So true is this that to say we live in a new age is almost a truism. Some of the evidences of this change are the supremacy of the machine, the shortening of the working hours with the consequent increase of leisure, more ways to spend that leisure, and men and women who are more physically fit to enjoy it. When one man can do the work of 250 men, when machinery is utilized to oversee machinery, when the average working week is thirty hours, it can clearly be seen that former standards of normality must be discarded and that men and women must prepare to live in a new age. Boys and girls, college men and women, must be prepared to live the new life.

Man must adapt himself or perish. He must readapt his mental and social attitudes, and, obviously, he must have mental and physical health to support those attitudes, a mind and body ready to respond to the new conditions. A man must be so perfect in health that he is not conscious of health.

Only a short time ago man needed merely physical endurance, great strength of muscle; the aim seemed to be to produce men with the strength of oxen. Today machinery does the heavy work, and there is no great need of men

HEALTH EDUCATION for the NEW AGE

And it is natural that we absorb the tempo of machinery.

to lift heavy burdens. There still will be need for muscle activity, for as G. Stanley Hall puts it, "If the muscles grow relaxed and flabby, the dreadful chasm between good intentions and their execution is liable to appear and widen"; but the activity will be for reasons other than extreme or unnatural strength.

Yesterday man had plenty of time; he did not have to hurry or to move rapidly while at his work. He took on the tempo of the oxen, the mules and the horses which he worked. Today man must speed up, must hurry, must move quickly. He works harder for a shorter time, but the work is of another kind. In reality it is a greater consumer of energy than the older forms, and therefore man needs a new kind of physical education. Statistics show that the nerves of modern man are too ready to snap; too many are at the point of breaking under the nervous strain. In short, he has not adjusted himself to modern conditions.

Just as our forefathers absorbed the tempo of the farm animals they used, it is only natural that we should absorb the tempo of the machinery we use. The machine is a time saver, but it saves this time only by working faster. The machine is efficient; it does its task methodically and rhythmically as long as every part is working properly. The same is true of man. He has caught something of the tempo and the rhythm of the machine. He puts his stress on time. The advertisements in business and industrial magazines stress the time-saving features of the products to be sold. Man, too, must be efficient. He must eliminate lost motion. He must accomplish a task in a given time. As long as every organ is working cooperatively and harmoniously he may not be aware of having any organs; but if one organ goes wrong, he becomes more aware of that organ than of all the others that are in good working order.

Changes in food and clothing are obvious everywhere. The modern breakfast is not like the breakfast our forefathers ate. Nebraska farmers do not stop their farm machines at noon long enough to go to the house to eat dinner. While they are sitting on their tractors they eat sandwiches. The tourist exists on "snacks" that

he grabs here and there or cooks in a makeshift fashion at some camp. Eating in restaurants is a common thing. Not many women in the middle and peasant classes ate meals away from home fifty years ago, but now it is not uncommon to see whole families eating Sunday dinner at restaurants and cafeterias.

The changes in eating and dressing habits have made corresponding changes in mental and social habits. C. Delisle Burns has pointed out that "the existence of new customs increases the tendency of the new generation to make experiments in new ways of living."

These are some of the "strains imposed by modern conditions." What of the man who is to withstand the strains? First of all we must learn more about the man himself. We have learned to think of him as a unit. There is no longer a division at the eyebrows. We no longer send one part of the child to school; rather, we send the whole child to school, and we have a right to expect the school to educate and to train the whole child. Despite the contentions of our good Puritan forefathers there is no enmity between the physical on the one hand and the mental and spiritual on the other. Like the machines he operates, man works as a unit. Any part that is not working, whether it is strictly mental or strictly physical, whether it consists of "nerves" or of bad morals, interferes with the smoothness of the mechanism, and the worker is handicapped. One can hardly improve on Huxley's definition of an educated man as one "who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of; whose intellect is a clear, cold, logic engine, with all its parts of equal strength and in smooth working order; whose mind is stored with a knowledge of the great and fundamental truths of Nature and of the laws of her operations; one who is full of life and fire, but whose passions are trained to come to heel by a vigorous will, the servant of a tender conscience; who has learned to love all beauty, whether of Nature or of art, to hate all vileness, and to respect others as himself."

Health education must become more and more a vital part of our whole educational program. Health education is undergoing a revival in Europe, and it is to be hoped that it will soon replace the all too frequent pretense now prevalent in America. The youth movement is no longer confined to Germany; it is spreading throughout Europe. The impressive objectives are worthy of attention. First of all they include bodily and physical development and education. The first includes all health habits as well as activities, and the latter includes all human behavior.

In the United States, physical education has seemed to have had no clear aims in the past. We have intellectualized and professionalized our physical education departments. If our educators choose to follow the example of Europe and put more definite stress on health education, it is to be hoped that it will be for health's sake and not for the sake of the team or the school or the gate receipts. Knowledge of the human body, such as is usually given in a textbook, is not enough to guarantee good health conduct. Prof. D. Oberteuffer of the physical education department, Ohio State University, says, "Modern subject matter must be vital to and functional in the life of the student, answering his needs, and being interesting to him because it helps him live a better life."

Health education should and must begin in the earliest years. Huxley stressed the point that the educated man was the "one who has been so trained in youth that his body is the ready servant of his will, and does with ease and pleasure all the work that, as a mechanism, it is capable of." In the earliest years, health education is not a matter of textbook knowledge of bones and muscles, not a matter of dumb-bell drills, but a matter of emotionalized training. It is a matter of habit formation to be sure, but the habits formed should be interesting and such as will help the child to live a better life. Health education should begin, as do all other divisions of education, on the most natural level possible.

Thinking of total body activity, thinking of education as an experience, as an activity, there is possibly no better beginning than the utilization of the child's natural response to rhythm. In England much is being done through poetry games, wherein the child is taught to respond rhythmically to the words he speaks. Vachel Lindsay did much good work in experimenting with the dance in connection with his poetry. At the Lewis and Clark High School of Spokane, Wash., Lindsay worked with Edith Haight of the physical education staff, now director of physical education at the University of Wyoming. Of this work, Lindsay wrote, "She has proved that anything that seems to be poetry to the listener can be danced by him while it is read to him."

The child can coordinate nerve and muscle and mind in rhythmic movements. He gets a real enjoyment out of it because it is as natural as the life he lives. It tends to give him control of himself, and it tends to develop grace of movement and more esthetic poise. The general wholesome effect is a tonic to his body as well as to his mind. It was used elaborately by the ancient Greeks in their effort to reach the perfection of a sound mind in a sound body.

Rhythmic games afford one of the best means of outlet and a training for the unfortunate, mentally dull pupils. Marjorie Gullan, originator of the Rhythmic Movement to Spoken Poetry in England, says, "I am assured by those engaged in teaching the *(Continued on page 894)*

Food Fads and Faddists

By MARION R. FARREN

The merits of a fad may be so fancifully portrayed as to make the truth seem questionable and uninteresting.

IT SEEMS almost incredible that with all the scientific knowledge popularly written and available on the subject of nutrition it should be necessary to take cognizance of the food fads and the faddists. One is almost tempted to believe that the recent and widespread interest in psychology would be sufficient to arm the layman with a weapon powerful enough to wipe them out at a single blow, for neither the fads nor the faddists can stand close scrutiny. But man is a decidedly gullible creature; his powers of reasoning are easily dulled by the force of his emotions, and it is this very characteristic which gives the faddists courage to stand forth even in the face of prosecution.

The merits of this or that particular fad are so fancifully and extravagantly portrayed as to bewilder the individual and make the truth seem questionable and uninteresting; some even go so far as to deny the principles of nutrition and to mock at the idea of research. The pathetic part of it is that the public seems unable to differentiate between the truth and the pretense or between those who know and those who do not know.

When the faddist is not making rash promises for things that are too good to be true, he is working on the influence of fear or the power of suggestion in his attempt to convince the public that his cult is its only hope for health and happiness.

The sensitive and easily influenced reader feels the shivers go up and down his spine when he is confronted by such statements as: Will you live to middle life? Are you starving your body? Are you being poisoned by acid foods? Of course he wants to live to middle life and beyond it. Gripped by the influence of fear and the desire to know, he reads on, only to find that he is poisoning himself every day with mysterious toxins which he is taking into his body through the wrong kinds of food combinations. He is urged to avail himself of the knowledge of correct dieting, as set forth by Doctor So and So of "international fame," to be had for such and such a price; or he is offered the information "absolutely free" with a year's subscription to this or that magazine.

Persons who think that they have food idiosyncrasies and hope to be benefited by the fad and those who have some organic disorder and are wavering between their physician's advice and the superstitions handed down to them by their ancestors are easy prey for such charlatans. They grasp for quack advice like a drowning man for a line; but in spite of the

When confronted by the statements of some faddists, the sensitive reader feels the shivers go up and down his spine.

"international fame" and gilded promises, the unfortunate victims experience no miraculous cures.

Another type of faddist dedicates himself to exploiting the special properties of certain foods. He is handsomely paid to recommend their use ad nauseam. He has been called the "eat-more" faddist by some, and it is doubtful whether a more descriptive title could be found. Every minute of the day somebody is promoting the sales of some food company via the radio, newspapers and magazines with lengthy recommendations and convincing evidences of their particular food's supremacy over every other food. The food itself may be all that could be desired, but no food except milk is so indispensable to the diet that its place cannot be filled by some other food from the same group. Variety in color, texture, appearance, flavor and preparation stimulates the appetite as well as the joyful emotions which are essential aids to good digestion.

Other commercial remedies, for they cannot truthfully be called foods, that are foisted on the public as essential for health and for the cure of constipation, catarrh, goiter, kidney disorders and even sinusitis are the outgrowth of rank commercialism. We are told that no one is safe from a mineral starvation; that land foods lack the necessary food minerals, and consequently, as a protection against the deficiency diseases, a commercial salt obtained from ocean vegetation is recommended. These statements are absolutely absurd and are written to frighten the reader into trying the remedy, which would be dear at half the price. A diet containing sufficient amounts of the green, leafy vegetables, fruits, milk, eggs and cod liver oil will certainly protect us all against a mineral deficiency. There are a few regions of our country, particularly near the Great Lakes and the St. Lawrence River, where the water and the soil are almost entirely lacking in iodine; consequently the fruits and vegetables from these regions are also lacking in this mineral unless the soil is chemically treated before planting.

Inhabitants of these districts protect themselves against simple goiter, which would be the result of a diet continually deficient in iodine, by using canned fruits and vegetables and sea foods, such as fish and cod liver oil, from nongoitrous regions, and by the use of "iodized" table salt. Concentrated iodine compounds have been given to school children and to nursing and pregnant mothers under the direction of the public health department; but since the amount needed by the body is so small, approximately .003 Gm. weekly, it is not advisable to use such compounds except under the supervision of a physician, as too much iodine is as bad as too little in that it stimulates an excessive production of thyroxine and thus causes exophthalmic goiter. Those who do not live in the goiter regions need not worry about an iodine deficiency if they include in their diet the leafy vegetables, fruits, sea foods and cod liver oil.

Other faddists borrow the superstitions and tales of black magic from the beginning of time and preposterously warn us not to eat tomatoes because they cause cancer, not to eat meat because it makes one sensual and warlike, not to eat nuts and cheese because they are difficult to digest, not to mix protein foods and carbohydrate foods because they react chemically in the stomach giving off gases which might explode and rupture the lining of the stomach, and not to eat sugar except in the form of honey because it causes diabetes. They claim that cucumbers are cooling, that onions will cure colds and prevent insomnia, that garlic will purify the system and prevent rheumatism and blood-poisoning, that blackberry juice is a great blood builder, and that maple sirup and buttermilk will cure diabetes. These statements are as fanciful and fictitious as is the legend that the moon is made of green cheese; and some of them are more than merely fanciful—they are actually dangerous.

There are also the fasting faddists who insist that one should starve for a period of from ten to twenty days each year to rid the body of impurities; that one should eat sparingly or not at all when sick because food feeds the disease and keeps the patient sick longer; that one

should eat breakfast and dinner but not lunch; or, dinner and supper but not breakfast; that one should eat only when hungry because lack of hunger is proof the body does not need nourishment; that fasting clears the brain and makes the senses alert. Occasionally, a one or two day fast using fruit juices and vegetable broths plentifully is prescribed by a physician in cases of obesity, high blood pressure or intestinal putrefaction; continued fasts, however, over long periods of time are definitely harmful and may result in acidosis and even in death. To eat sparingly or not at all when one is sick encourages rather than discourages poor health. To be sure, the food must be simple and easy to digest, but it must be sufficient to provide for the repair of the tissues destroyed by the disease if a severe loss of weight and strength and the needlessly prolonged convalescence which would naturally follow are to be prevented. Appetite is too easily influenced by habit to be a dependable guide to food requirements; it is easy to become accustomed to too much or too little.

The practices of going without breakfast or lunch should be forcefully condemned. Observations and experiments on individuals whose nutrition was normal have shown that better mental and physical work is done by those who eat three meals a day. Breakfast is needed to stimulate the colon and prevent midmorning fatigue, and lunch is needed to provide energy for the afternoon's work. The brain workers who frequently complain that a noonday meal makes them dull and sluggish in the afternoon should eat their heartiest meal in the evening and confine their lunch to the simple, easily digested foods. As for fasting clearing the brain, one needs only to reflect a moment on the testimony of Lord Carnock after a month of such fasting in a London sanatorium. He started by reading history and ended up by reading "Alice in Wonderland" because he was not fit for any more strenuous mental effort.

Not least in number or importance are the "nature" faddists. Those who follow this cult believe that food should be eaten only in the natural state; this in itself is ridiculous, as many foods are rendered more digestible as well as more palatable by cooking. Highly milled grains are absolutely taboo with these exponents of natural foods. They advocate only the whole grain flours and cereals; and while, in fairness to the whole grain products it must be said that they do have the advantage of containing the minerals and vitamins of the grain, it is exceedingly poor judgment to surfeit oneself with them to the point of disgust merely to guard against a mineral or vitamin deficiency when an adequate amount of milk, fruits and vegetables and cod liver oil in the daily diet will supplement the lack of them in the white flours and cereals or the intermediate products, the so-called whole wheat or entire wheat flours and cereals. No one food is a perfect food in itself in that it can provide for life and growth without the help of some other foods; hence it seems foolish to split hairs over the advantages of the whole grain foods.

Some nature faddists preach the gospel of satisfying the body's inclinations or cravings because, they say, this is nature's method of meeting the body's needs. Such a theory loses sight of the force of habit. One is more likely to crave something which one is accustomed to having regularly than something one needs. Thus we crave sweets, cigarets, tea and coffee because we develop a taste for them rather than because the body needs them. In fact, we often crave the things we should not have.

These are by no means all the food fads. Their number is legion, and the harm done by them is not estimable in words or figures. As long as man eats food, there will be individuals who will set themselves up as authorities, basing their theories on personal experiences, superstitions or commercialism and preaching their gospel to all who will listen to them.

If you are interested in studying the intricacies of your body or the application of the principles of nutrition, your doctor will be glad to recommend reliable books for you to read. Some boards of education also provide suitable courses with teachers adequately trained and experienced.

Make every effort to give your body the things it needs, but do not make a fetish out of nutrition; a healthy mind is as essential as an adequate diet in the building of strong, healthy bodies.

Other faddists borrow superstitions and tales of black magic as warnings against certain foods.

Help for the Deafened

By RAY LYMAN WILBUR

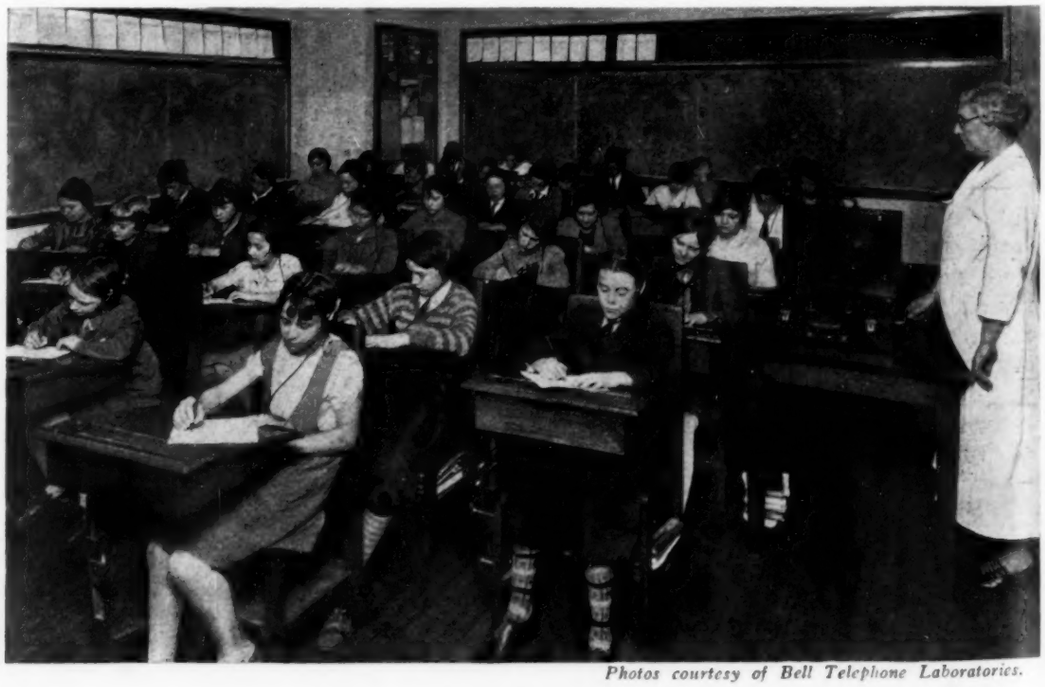
IF ONE HAS fallen arches, housemaid's knee or boils on the neck, one probably becomes promptly and painfully aware of the fact. This, however, is not true of the affliction of deafness, which may steal on the victim without pain and so slowly that he may not be conscious of its coming. The insistence of a toothache is likely to drive its possessor to seek a cure. No mother will sit idly by when her child has ringworm on his cheek. But the malady of impaired hearing may escape attention through the years or the decades.

Man is distinguished from other living organisms by his attitude toward his fellows. Nature, in the struggle for the survival of the fittest, inflicts its harshest penalties on the weak and the handicapped. Mankind has thrown a mantle of protection about those who are crippled, injured, blind and deaf. Each civilization is measured by its capacity to prepare its youth, by its care of the aged and by the amount and kind of help given those who lack the full resources of body and mind. There are those who view any efforts made to support the weak as of eventual harm in the upward struggle of the race, but there are great benefits to be derived from the adequate care of the unfortunate. Not only are there moral values to those participating in such efforts, but the salvaging of other human beings, combined with the training and preparation of them, often provides assets of outstanding importance.

Without the senses, life would be dull indeed. They open up the world. There is a fortunate compensation in nature so that when one or more of these senses is defective, the others are enhanced. No one can measure the values of his own experiences to other individuals, and no one can prophesy the value of any growing child to mankind. Each child is entitled to the fullest opportunity for the development of his own personality and of his own abilities. Each child is entitled to as much help as is possible in overcoming inherent disabilities or those resulting from accident or disease. The child must use what he actually possesses in physique and brain. The student cannot send out for new organs or new brain cells. He must have instruction and guidance in making the best of those he has.

Pioneers are needed to open the way for the adequate care of all the handicapped. It is inevitable that there will always be such persons. The situation must be met, and the very best that can be done for each and every one of them must be done.

The ear is one of the most neglected of human organs. The numbers of children in school who



Approximately 3 million children in the United States have measurable hearing defects. Tests made with the audiometer disclose such disabilities.

Photos courtesy of Bell Telephone Laboratories.

are handicapped by impaired hearing are legion. Their proper treatment has been largely neglected.

Of the more than 122 million people in this country, more than 10 million, or about 1 out of every 10, have measurable hearing defects. This number exceeds by several millions the number of people who live in the New England states or in the states bordering on the Pacific coast. This means that at least one member in a third of the American families has some form of ear trouble.

To lose one's hearing is worse than to lose one's job; to lose both is doubly tragic. The American Federation of Organizations for the Hard of Hearing, through its various leagues, is rehabilitating thousands of such handicapped persons and is showing them how to readjust their lives and again become happy self supporting citizens.

Horace Wilson was a mischievous pupil and backward in his studies. He seemed keen to do anything in school except pay attention to what the teacher might be saying. When she scolded him, he grinned at her in a most exasperating manner. She finally sent him home, advising his parents that he was "incorrigible and too stupid to learn." His mother brought him back to school the next day to see whether the principal would reinstate him. He had no visible handicaps, but it was thought that a thorough physical examination might be helpful. The doctor found the boy's hearing defective. He was given private lip reading lessons and kept in school. He was graduated from both high school and college with honors and is today a professor in a great university.

Though Horace Wilson's case is remarkable, it is not without precedent. There are hundreds of thousands of children in the schools throughout the country who are dropping behind in their classes, unable to cope with their fellows because of this physical defect; and the saddest part of it is that they or their parents or their teachers may not realize where the trouble lies.

Surveys made by the American Federation of Organizations for the Hard of Hearing show that approximately 3 million children in the United States have measurable hearing defects.

Also, when it is considered that every one of these cases of impaired hearing, no matter how slight or seemingly insignificant, is potentially serious and may be the forerunner of chronic progressive deafness, the menace in the foregoing figures may be better understood.

Some leading otologists maintain that the majority of the cases of deafness can be cured if they are detected and properly treated before it is too late. What tremendous possibilities in preventive medicine and preventive charity present themselves in this field!

Although seemingly incredible, reports indicate that the number of deafened children who

With the use of multiple telephone head sets, it is possible with the audiometer developed by the Bell Telephone Laboratories to test from one to forty persons simultaneously.

repeat grades in the public schools is three and one-half times as great as the number of children with normal hearing who must repeat their work. A startling discovery was made in connection with these investigations. It costs 12 cents to test the child for hearing and enable remedial measures to be taken, while it costs $60 for a pupil to repeat a grade; and the necessity for repetition is often occasioned by an impairment in the hearing!

If adjustments are not made, the boy with impaired hearing drops back with children his junior in years and his inferior in physique. What wonder that he finds himself out of tune with his environment! He is looked down on by younger children, and he comes to think of himself as inferior and seeks to get ahead by deceptions. He may shut himself away as an economic misfit, become a delinquent or end up as a dependent. In any event, his lot is unhappy and so is that of those with whom he lives.

Who is responsible for the tragedy if this boy, potentially a successful citizen, shall be allowed to drift until he becomes a burden on society when with a little individual attention he might have been another Horace Wilson? It is well known that anything that contributes to the advancement and development of children and helps them to progress to their rightful position in the economic and social world is above purchase and beyond price.

The welfare of children is by far the most important problem which faces any nation. The White House Conference on Child Health and Protection, comprising 900 experts, endorses the program of the Federation and specifically urges that schools provide adequate equipment for medical examination and vocational guidance.

Because of the poor facilities available to the schools, the difficulty of detecting slight defects and the expense of accurate individual tests, a new method of testing was sought. An appeal was made to the Bell Telephone Laboratories to develop a better, cheaper and faster method of testing. After several years of research and

experimenting, the audiometer was perfected. With the use of multiple telephone head sets, it is possible with the audiometer to test from one to forty persons simultaneously. From the third grade upward, a complete class can be tested in about twenty minutes. While it is not the type of exact precision instrument that is used by otologists for individual testing, it is practical for school purposes.

School boards no longer have any excuse for not providing adequate hearing tests. It is a grave injustice to the children if schools now fail to provide means for proper equipment. While special equipment, education and vocational guidance are now available, only 174 cities have provided adequate means in the schools for testing children's hearing. Less than 100 cities provide instruction in lip reading, and only a few give aid in vocational guidance.

A clear distinction should be made between the deaf child and the deafened, or "hard of hearing," child. The deaf child either is born deaf or has become deaf before learning to speak and understand language. He requires special attention and should be educated in one of the schools for the deaf. There are approximately 55,000 persons in the United States who are totally deaf. About 1 person out of each thousand is blind. For each person who is totally deaf or blind, there are 60 who are hard of hearing.

The deafened child is almost normal. He has learned to speak from hearing others speak. His emotions are stirred by the same sounds as are those of his hearing companions, although some tones become distorted. He should therefore be educated with normal children in the public school, where he can listen to normal speech and learn to control and to modulate his voice properly. The deaf child grows up with his deafness and does not sense the depth of his loss in not being able to hear. Persons with acquired deafness feel their loss keenly. They are haunted by the voices of their friends and other sounds that are dear. The adult person who becomes hard of hearing must readjust his whole life, must become rehabilitated and recreated. One of the greatest factors in the process of recreation is lip reading.

Lip reading now comprises a special department of the National Education Association. It is being taught in nine of the great universities of this country. There are 561 teachers of lip reading among deafened adults; ninety-six cities have classes in lip reading in the evening public schools, and seventy-nine cities offer instruction in lip reading to children. Lip reading augments the hearing loss with sight; and when it is supplemented with a good hearing device, it creates new hopes for the deafened, new contacts and in fact a new world. Many believe that it is the greatest aid in helping the isolated to conquer their fears and ears. One might converse for an hour with an expert lip reader without being conscious of his deafness.

The Federation comprises the only group of handicapped persons who have ever united to form their own organization to help themselves and others like them. It began its activities in 1919 through the joining together of a few groups or leagues of persons who suffered from defective hearing. Thus far they themselves have done most of the work and contributed most of the resources.

Why did not champions arise to fight the battles of the hard of hearing? Why has no wealthy person come forth to endow this most worthy cause? Why is the public apparently so lethargic toward this institution which is crusading so valiantly to rescue the millions who are stranded on the bleak shore between good hearing and total deafness? The answer will be found in the history of literature and of the drama. For generations and centuries, deafness has been considered the legitimate property of the jester and the clown. The world has laughed at hardness of hearing, thinking little of its own hardness of heart.

The Federation faces a crucial financial situation. Its own members, who have been its principal contributors, were often the first to be dismissed when the economic crash came, and it is having a strenuous struggle to carry on.

Leading otologists and psychologists maintain that persons who have lost a substantial part of their hearing have another handicap which in many cases seems as hard to overcome as their deafness. They feel that they have been deserted on some lonely, silent shore. The fits of melancholy following the loss of hearing are intensely overpowering. It leaves many of its victims socially and economically stranded. These mental conditions make deafness all the more tragic.

Contrary to general opinion, the deafened are not less efficient than others in the work suited to them. The person whose hearing is impaired may be a better worker than a normal person. He is not distracted by outside noises. He does not waste time in idle chatter. He concentrates and produces. Fully realizing his handicap and knowing that it is not so easy for a handicapped person to change, he can be depended on to remain with his job.

The American Federation of Organizations for the Hard of Hearing maintains general offices at 1537 Thirty-Fifth Street, N.W., Washington, D. C. A multitude of persons who are interested in the alleviation of this infirmity are bound together for work in this cause. Of those in the United States who suffer from an impaired ability to hear, probably not half know of the existence of these agencies interested in helping them. All such persons can learn of the way to relief by communicating with these agencies through the Washington headquarters.

DENTAL DENS

PART II

By

Robert H. Brotman

Dr. Skinem disregarded scientific rules and considered only the business aspect.

LET US continue with the adventures of Dr. Skinem, specialist in landing contracts for Dr. Hurtless Herkins' dental den. Leaving Dr. Souse to extract a tooth in one operating room, Dr. Skinem entered another to conquer a second victim.

The victim happened to be an elderly woman who wished to have a broken plate repaired while she waited. She accepted the charge and was informed that she would not be obliged to wait long. She was ushered into the reception room as Dr. Skinem approached another patient in the third operating room.

"What can I do for you, miss?" inquired the eager scoundrel.

The patient was a beautiful young girl, and her teeth were perfect, with the exception of a bicuspid tooth which needed a filling. Her teeth glistened as she smiled and replied, "You advertise fillings for 50 cents, and I need a tooth filled."

The pseudodoctor examined the tooth, hesitated a moment, looked solemn and said, "I'm very sorry, but that tooth cannot be filled."

The girl appeared amazed and then despondent as she stammered, "Does it have to be extracted?"

"No," came the response. "The tooth is badly decayed, but a crown could save it. It wouldn't show very much in the corner of the mouth."

After a little persuasion the contract was made and a deposit was recorded. A good tooth which could have been filled easily was ruined, and a beautiful smile was marred because of a profit monger. A filling could not have been inserted without a financial loss. It would take less time to make the crown, and the profit was substantial.

Dr. Skinem returned to the first operating room where a new victim awaited his unscrupulous clutches. A gentleman wished to have a pair of the advertised plates. He was shown a clumsily constructed sample plate with dark teeth.

"I don't like those," he said emphatically.

"Well, how about these?" questioned the salesman as he displayed a fairly well made plate, small in size and mounted with beautiful pearly white teeth. "This is our triple suction featherweight plate and costs $10 more for each plate. You don't get a set of teeth every day, so why not get the best? These are guaranteed for ten years and will last you a lifetime. They'll make you look fifteen years younger."

By this method the patient was raised $20 on the same set of teeth. The color of teeth does not affect the cost of them, yet fakers advance fees as much as $100 for teeth a few shades lighter. There are tricks to all trades, and the "specialists" in Dr. Hurtless Herkins' dental den knew many of them.

Dr. Skinem, "contractor," was now entertaining another victim after leaving the gentleman with Dr. New.

Dr. Souse soon had a "bite" taken in a huge piece of softened beeswax.

The lady who was waiting for her plate to be repaired was becoming impatient. She called for Dr. Skinem and complained that she had been waiting for an hour and a half. Dr. Skinem lied himself out of the predicament nicely by telling the patient that the repair had been completed but an accident had occurred and the job was imperfect. He would not allow a poor job to leave the offices of Hurtless Herkins. He had ordered the task done over again, and it would be another hour before the job would be finished. Meanwhile he asked her whether she had a spare plate to wear and told her that she could have gone shopping in the meantime if she had possessed one. With his suave manner it did not take him long to get a new contract. Dr. Souse soon had a "bite" taken in a huge piece of softened beeswax, which he then threw into the sink to await use on the next victim. The impression taken was an excuse that the work had been begun, in order that a deposit could be obtained. Meanwhile the lady continued to wait for her repaired plate. Plates may be fixed easily while the patient waits, if the latter is inclined toward marathons!

Dr. Skinem next practiced his skill on a Negro "customer."

"Well, what can we do for you today?"

"I'd lak t 'hab one o' dem gole crowns yu advertises fo' fibe dollahs on dis yeah toof," replied the Negro with a broad grin as he pointed to a perfect upper front tooth.

Ever alert, Dr. Skinem was ready to apply "psychology."

"Why don't you have one made for the other side, too, so it will match?" he asked. "We are offering two at a special price."

"I'se only got eight bucks. Say, doc, which is the right side t'put a crown on?"

Dr. Skinem hesitated only for a split second. "Well, I'll tell you. You see, the nerves that come from the right side of the brain control the left side of the body. Now the heart is on the left side; so to avoid pressure on the heart, it would be better to put the crown on the left side. Here is one of our advertised crowns," continued Dr. Skinem, as he extended the sample for inspection, "but how about one of these?" He proffered another more glistening one.

"What's a dif'rence 'tween 'em?" inquired the Negro.

"Well, you see, this crown has a special electric polish and costs $2 more."

"Is zat d'best, Doc?" asked the victim.

"Well, no," replied Doc. "Before we put the electric polish on we can put some more gold on the inside to make it stronger. It will last much longer, and it only costs $1 more. You don't get a crown every day, and I think that every man is entitled to the best. Let me have the $8, and I'll give you a bargain. You'll walk out of here with a beautiful smile and a tooth you can be proud of."

Of course the poor Negro did what they all do. A perfectly good tooth was ground down and prepared for a crown; it would probably have cost the patient $1 more for cementing it into position, but Dr. Skinem knew that the patient did not have another dollar. The advertised crown was purchased for nearly twice its advertised price, and the Negro went about telling his friends that their crowns were made on the wrong side and that they ought to go to Hurtless Herkins where they know their "stuff."

While Dr. Skinem left the office for lunch, Hurtless Herkins substituted for him. His first patient was also a Negro.

"Do yu pull teef by 'lectricity?" inquired the patient.

"Yes, indeed," answered Herkins. "Let me see the tooth."

Herkins' policy was never to refuse a request which might bring a fee. He examined the tooth and found that it was pyorrhetic. The extraction could be accomplished easily without the use of an anesthetic.

He therefore said to the patient, "We advertise extraction with novocain for 25 cents. With electricity it will cost you $1. How do you want it done?"

"'Lectricity," came the snappy reply.

"O. K.," acquiesced the "doctor," as his glance swept round the room. He then approached the mantel on which rested a large ornamental vase.

Fortified with this vase he returned to the patient and held it over the patient's nose and mouth.

"Breathe deeply. Faster, faster, faster, breathe deeper," ordered the electricity administrator as he forced his right knee into the patient's ribs. Suddenly the vase was removed from the Negro's face, and Herkins pressed the ribs with his knee, reached quickly into the patient's mouth with the forceps and extracted the tooth.

"Well," inquired Herkins of the victim, who was now washing his mouth, "How do you like having teeth extracted by electricity?"

The satisfied patient gurgled his answer, "Doc, I wouldn' hab it done any oder way!"

In Dr. New's operating room another patient was waiting. Herkins approached him and after a few words was examining his mouth. The prospective victim informed him that he had been to a number of dentists and that they had all refused to make him bridgework. His pyorrhetic teeth still remained in the upper left jaw. On the upper right side, however, only the central and cuspid teeth remained.

"Of course," puffed the quack, "you have a very difficult case, but I can make you a bridge, and I feel quite confident that it will prove satisfactory. Naturally, it will cost you more than the regular advertised rates."

With a pleased expression, the patient said, "I don't want a plate, and I'm willing to spend more."

The fee was established, and the unscrupulous charlatan took the "bite" and received a substantial deposit. The bridge was made by placing a crown on the cuspid and attaching three teeth to it, see-saw fashion, as the actual picture of the work shows.

Of course the bridge felt fine to the patient when it was first inserted. For nearly six months he grasped every opportunity to show his wonderful piece of bridgework. However, at the expiration of this time it became imperative to extract the tooth with its attached bridge. Hurtless Herkins had been so impressive that the patient returned. He was informed that the guarantee still held good. The bridge had not broken. It was in perfect condition, but no one can guarantee the patient's health or his own teeth. So the profit monger made a new contract for another restoration while making the patient believe that he was receiving an allowance on a new contract.

But let us go back to Dr. Herkins' work during his opening day. Before being relieved by Dr. Skinem at the end of the lunch hour, Dr. Herkins handled a common case. It was the case of a young woman whose mouth indicated meticulous care and whose teeth were beautiful. She had been reading stories about pink toothbrushes and about four out of five having pyorrhea. She had noticed blood on her toothbrush and believed that she had pyorrhea.

Herkins stated gravely, "I have a rare drug which comes from the jungles of Africa."

Herkins examined her and stated gravely, "Yes, you do have pyorrhea. It has not progressed very far, and I can cure it for you quickly. After a few treatments you will be all right. I use my own preparations and methods. I have a rare drug which comes from the jungles of Africa. It is a sure cure, but it is an expensive drug. I am the only one in the city who has it."

The bait was effective, and another exorbitant fee was obtained. No pyorrhea existed in the first place; but another patient was made, and her friends came to the dental den on the recommendation of this hypochondriac.

When Dr. Skinem returned from lunch, a young man of 23 was seated in the operating chair awaiting him. The patient was in a mood that dentists often encounter. He had been suffering severely from a bad tooth and told Dr. Skinem, "I want all my teeth out. I have them fixed, and the fillings don't last. My teeth are soft and give me a lot of trouble. I want all of them out. My mind is made up, and I want plates."

Skinem found that the mouth contained about twenty good teeth. Several of them had been filled, but they were in a fine state. The upper jaw held a four tooth bridge in front. There were three cavities. One was causing the toothache.

Without a word of advice, Skinem asked, "How much do you want to spend for teeth?"

"Twenty-five dollars," was the reply.

"Oh!" said Dr. Skinem, "you don't want cheap teeth. You are a young man yet. Look at these natural plates with triple suction. They are being offered today as a special for $40. You don't want to wear teeth that look false and unnatural."

The patient knew less after examining the proffered plates; but the reasoning appealed to him, and he agreed to take the more expensive plates.

"Now," continued the quack, "you know that you have some teeth that will be hard to extract. I would advise you to have them out by our Air-Sweet method. You just inhale a little air and go to sleep. Our experts administer it, and you will feel nothing. You have so many to be extracted that we will do them in three sittings. If you want novocain injected by needles there is no extra charge. I will give you the low fee of $5 if you want the Air-Sweet."

"That's $45 altogether, with the Air-Sweet, is that right?"

"Yes sir, that's right," replied the charlatan. "There is one other thing before we start. We have a special plate called Palooka Plate. This plate is acid proof; that is, it does not collect odors from the acid of the mouth. These plates go through a special process whereby each pore is closed up. As long as you are doing the right thing by getting the best, why not get the Palooka Plates, which cost $10 more for each? You can get them on our credit plan; you can come in once a week and make a payment."

Skinem did not say that in the six months waiting for healing the plates would be paid for before they were obtained! He had raised the $25 "job" to $65. He ordered the upper front teeth and the bridge removed. This would embarrass the patient, as he would now display a toothless smile, and would force him to go through with his dental work quickly. Dr. Skinem disregarded scientific rules and considered only the business aspect, as the quack always does.

(To be concluded)

Man of Tomorrow

(*Continued from page 884*)

mentally deficient that the results obtained by simple regular movements to spoken poetry have been most encouraging in the coordinating effect produced upon the children."

"Health is character education par excellence," Dr. Frederick Rand Rogers of Boston University says, and he amplifies the statement even further by saying, "those physical educators who have most conscientiously striven to improve their pupils' physical fitness have (and often much to their surprise) discovered the social character of both teachers and pupils to have improved concurrently."

If, from the primary school to the university, we would concentrate on the health of the student, there is no reason to doubt the improvement in health and wealth and character that would result. Our fathers, and even many of those now in educational work, lived at a time when children were apprentices to their parents. Parents and children were separated for hardly an hour of the day. Children learned from their parents. They learned a trade; they learned what their parents knew about how to live and about health. Under modern conditions, children are with their parents for only a small fraction of the day. Trades and professions, health and character have to be acquired from sources other than the parents. As a consequence the patriarchal father with his authoritarian airs has disappeared, and so have the meek, submissive children of the older day. Young people today are independent, outspoken and often even inconsiderate. Thrust into social institutions where discipline of a kind must be upheld, these youths revolt. Not being definite and specific, the health program too often fails to benefit the student. Character formation is therefore obstructed. If the health program is "character education par excellence," then it must be scientifically and efficiently carried out. It has no esoteric powers. It cannot benefit the pupil who does not voluntarily expose himself to it.

All this indifference to health education is not chargeable to the perversity of the boy or the girl. Part of it must be accounted for by the lackadaisical manner in which it is enforced. Too many schools and colleges have no health education; they have only a football team or a basketball team. For those students who are not on the team there remains only the foolish notion that their health education comes from "supporting the team."

If this sort of thing continues, there is no predicting the consequences when these boys and girls become men and women in an age of much leisure, in an age requiring trained minds and bodies and nerves of high resistance. The Greek notion of leisure was not a time in which men did nothing, but rather a time in which they did what they really wanted to do. Leisure unwisely spent is worse than no leisure at all. Health education for the new age is charged with a large responsibility; on it rests the success of the next generation.

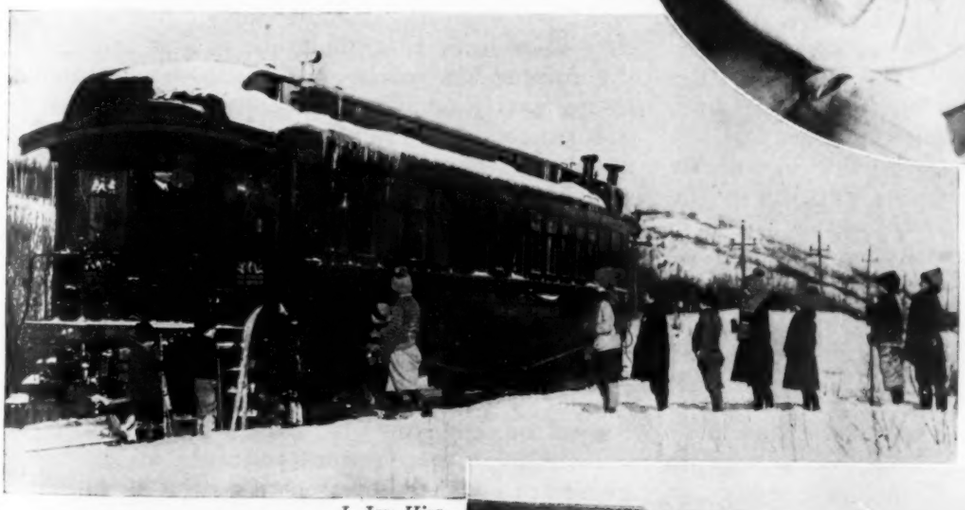
Going to School in Other Lands

Ewing Galloway

Mexico. There are now more than 420 federal schools in Mexico and often the school is the outstanding piece of architecture of the town. The one pictured above has bright blue walls; the children are in the courtyard into which the classrooms open.

Ewing Galloway

Kashmir. Mohammedan children employed in silk filatures have a little school inside the factory. The 8 year old boy shown above is doing his passages from the Koran on a wooden board.



J. Jay Hirz

Canada. A school car furnishes the only means of education for many children in the sparsely settled districts of northern Canada. The Canadian National Railways equips and operates the car provided by the Dominion government.

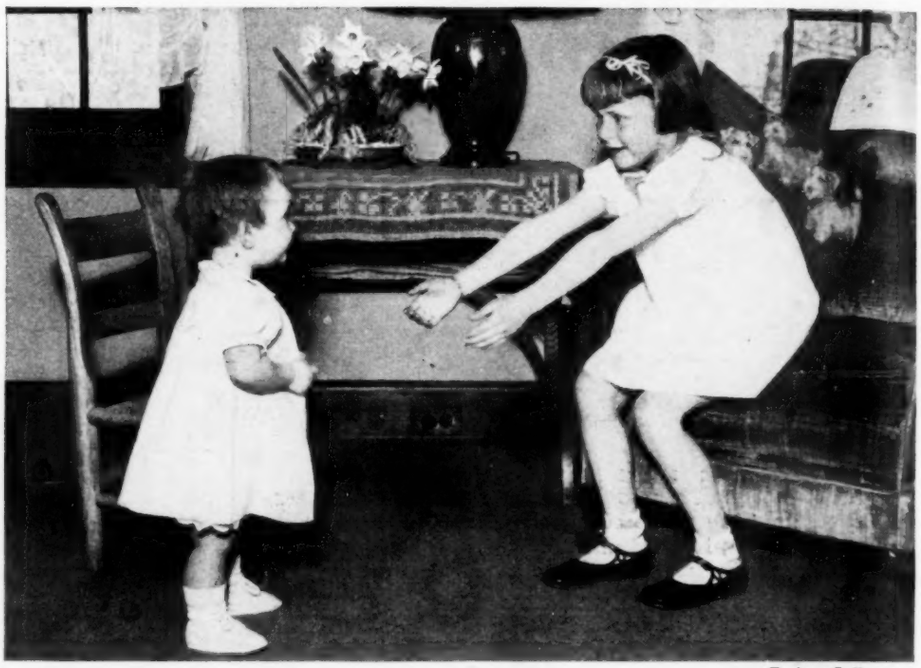
England. Britain's most luxurious elementary school has been opened at Erith, Kent. It accommodates 1,100 pupils and cost £60,000. The view at the right shows one of the quadrangles with the well lighted classrooms in the background.

Acme

Does Your Child Walk Correctly?

By

PAUL C. COLONNA



When learning to walk, all children have a tendency to spread the feet wide apart.

Ewing Galloway

I WONDER how many parents who notice at what age their children begin to walk also notice whether or not they walk correctly. There cannot be a hard and fast rule about the age when children begin to walk because some learn to stand and to toddle alone more quickly than others; but it may be stated that ordinarily the healthy, normal child begins walking by the end of the twelfth or fourteenth month.

There are certain orthopedic conditions, however, in which delayed walking is the rule. One is congenital dislocation of the hip, a condition in which the child is born with one hip or both hips out of place. This disability occurs far more frequently in girls than in boys, and many times the mother is the first to notice something peculiar about her child's walk. There is no pain associated with these dislocated hips in children, and therefore congenital dislocation of the hip is rarely recognized before the end of the first year. Even after that, much valuable time is often lost by delaying proper treatment. An educational program toward this condition should be encouraged, for undoubtedly many children could be helped; and if each mother would insist that her doctor carefully examines both hips of the baby when he routinely examines the heart and lungs, it would help center attention on an early diagnosis. When a congenital dislocation of the hip is present, the child walks with a distinct and characteristic limp; and if only one hip is dislocated, the affected leg appears to be much shorter than the normal side. The best way to detect any limp or early evidence of incorrect walking in the child is to have the patient walk naked in a well lighted room. Emphasis should be placed on the importance of beginning proper treatment at an early age, for while this rather serious deformity does not affect the child's health, it becomes a real handicap in later life. The best opportunity both to reduce the dislocation without an operation and to enable the child to obtain a stable, useful hip joint lies in the discovery and treatment of the dislocation while the child is under 3 years of age. This treatment consists essentially in reducing the dislocation and holding the hip in place with a plaster cast for a sufficiently long time to assure its permanent stability; even under the best of conditions the treatment requires an extended period of careful supervision on the part of both the parent and the orthopedic surgeon.

There is also another type of deformity that will prevent the child from walking correctly. Every one has doubtless heard much about rickets and how the disease may develop in children who do not receive the proper food or who do not receive sufficient sunlight. The effect of rickets on growing children is evidenced by the bones becoming softened, so that they may bend under the stress and strain of normal activity. The disease usually begins between the sixth and the eighteenth months, although it is by no means confined to this period. The bones of the lower extremities are often deformed, especially by habitual postures taken while sitting or creeping; these deformi-

ties increase when the erect attitude is assumed. The most marked symptom may be muscular weakness, which may delay walking. It has been said that "A child of normal intelligence, who is not ill and who has not suffered from exhausting disease and does not walk at two years of age is probably rachitic." The decrease in the number of rachitic deformities, however, suggests the likelihood that the percentage of children having rickets is distinctly on the decline. There are two striking deformities resulting from this dietary deficiency disease; these are bowlegs and knock knees. The phrase, "Oh, the child will grow out of them," is unfortunately too frequently heard, for the severe types of bowlegs and knock knees do not spontaneously straighten themselves. It is wise, therefore, to seek proper medical advice for even mild types of rachitic deformities and to remember that bowlegs and knock knees can always be corrected provided that they receive early and proper treatment. From the orthopedic standpoint, simple alterations in the shoes may be all that is necessary to correct bowlegs or knock knees. In other cases, braces, plaster casts or surgery may be needed.

During the examination, while the child is walking around naked, one should also notice the way in which the feet are held while walking. Here a word of warning must be given to the proud father and mother who all too frequently urge early walking for their children. Walking at too early an age is conducive to the development of bowlegs, knock knees and flatfoot, for if excess stress and strain is placed on bones, muscles and ligaments before they have been sufficiently strengthened by growth, deformity will result. The development of a normal, healthy child is constantly progressive and to a remarkable degree follows out a regular pattern. Attempts to hurry nature are usually fraught with danger.

When learning to walk, all children have a tendency to spread the feet wide apart as this renders them more secure against falling. However, when the child learns to balance his body and to stand erect, he is unconsciously exercising the muscles of the feet and legs. In this active attitude of walking, the feet should be held parallel, the toes pointing straight ahead and the foot directly under the leg. If the child's muscles are too weak or if proper attention is not directed early toward this normal, so-called Indian walk, the foot spreads and the weight of the body is borne not by the muscles, as nature intended, but wholly by the ligaments and bones. The foot then becomes "flat." The child turns the toes out; his gait becomes slouchy, and he appears to push his feet along sideways rather than to walk over the foot with a springy, elastic step.

Mothers often erroneously try to force their children to "toe out" while walking. This is a vicious habit, as it predisposes to foot troubles. Mechanically, this is also a poor attitude for the foot to assume. The foot is really a complicated structure, composed as it is of many bones, joints, muscles and ligaments. In general, walking is a combination of correlated foot activity in which the whole foot should take part while the entire weight of the body is alternately borne by the right foot and the left foot. Most of the weight should fall toward the outer border of the sole of the foot, and the feet should be kept in a parallel line when walking or running.

As the child becomes older, much can be accomplished if he can be trained to become foot conscious, for it has been truly said that the treatment for flatfoot begins above the shoulders. However, until the intelligent, active cooperation of children with weak or imbalanced feet can be secured, the orthopedic surgeon has to devise accessory methods of treatment. These consist not only of proper foot exercises and proper shoes but in certain instances of properly fitting arches in the shoes to hasten correction in these cases of flatfoot. The best of all foot exercises is the proper walk. The proper type of shoe should be constructed to fit the normal foot and not to make the foot conform to the shoe. Fortunately, children are not shoe conscious; they do not submerge everything to the appearance of the shoe, and they will gladly wear the proper type. In general, their shoes should be of the broad toe type, and the sole should be rather flexible. It is extremely important that the proper shoe should contain sufficient space for the independent movement of the toes. Another important factor in foot care should be attention to the stockings. Too short stockings cramp the toes almost as effectively as too short shoes. If the shoe fits the foot and at the same time permits the use of the small foot muscles while walking, many later foot troubles may be avoided.

It may be painful for the child to walk, but usually he will only admit getting tired easily or will walk only for a short distance before he begs to be carried. This complaint of being easily fatigued after walking is frequently heard if the child has so-called flatfoot. I say "so-called flatfoot," as unfortunately the phrase has established itself rather firmly in the public mind. In some instances there is actually a flattening of the arch of the foot, or a true flatfoot. However, in many children it is found that the feet will not accomplish their task without discomfort simply because the feet are not guided properly during walking and that the arch is not really flat. This type of foot may be painful, and yet the arch may not be flattened at all. For this reason the term "flatfoot" is not a particularly good one. Ordinarily, medical men prefer to use the term "weak foot," for this describes the condition more accurately.

The family doctor, who assumes the responsibility of caring for the whole family, is coming back into his own.

Want to Be a Doctor?

By WINGATE M. JOHNSON

TWICE within the past four years I have been asked to speak to high school students on medicine as a vocation. In crystallizing the impressions formed of my profession after twenty-five years spent in medical practice, I do not propose to paint the picture in glowing colors, but I shall endeavor to give as accurate an idea as is possible of the work, its favorable and unfavorable features. As Oliver Cromwell's portrayer was commanded to do, I propose to paint the picture "warts and all."

The practice of medicine is the oldest of all the professions. It was born of the sympathy of man for man. In its principles it is the most unselfish of all vocations. It is the only vocation whose members are constantly striving to work themselves out of a job.

The qualifications a doctor needs are, first, a sound mind in a sound body; second, equanimity, or evenness of temper; third, sympathy of the practical sort that seeks for means to relieve suffering rather than expends energy in pitying the sufferer; fourth, tenacity of purpose, or one of Fosdick's twelve tests of character, "the power to see it through." Finally, no one can be a real physician unless he loves his profession for the good that he can do rather than for the goods he can acquire.

Sir William Osler once said that work is the master word in medicine. More recently Dr. William Allen Pusey has said that this is only a half truth and that "intelligence is the master word in medicine; intelligence trained to labor, intelligence that has been educated in 'learning the rules of the mighty game.' To the man who has trained intelligence the highest stakes are paid." At least, a good intelligence quotient is a handy thing to have when one is wrestling

with medical problems, whether before or after graduation.

As to the preparation necessary for the practice of medicine, a high school education and two years of college work are required for admission to all approved medical schools. A college degree is required by some medical schools and preferred by all except one. After four years in a medical school, at least one year spent as an intern in a good general hospital is almost essential for the general practice of medicine. After that, specialization in any branch of medicine requires from one to five years' additional work, but a specialist will be better qualified if he first has several years of general practice. In passing, it may be remarked that while few men now will attempt single-handed to practice all branches of medicine and surgery, the family doctor, who may limit his work as much or as little as he chooses but who assumes the responsibility of caring for the whole family, is coming back into his own.

In 1904, the American Medical Association created the Council on Medical Education which in thirty years has raised the level of training for physicians from one of the lowest to one of the highest of the professions. Through its efforts a very large number of weak proprietary schools were eliminated. The schools that have continued have been brought up to a standard which compares favorably with the best in European countries. In spite of the reduction in the number of schools by more than one-half, the number of graduates continues to be in excess of the number of physicians needed for replacement of those who die or leave the profession. Within the last ten years the number of applicants for admission to medical schools has gradually increased so that at the present time there are twelve or thirteen thousand candidates each year from whom only 6,000 can be admitted to the schools. Under these circumstances there must necessarily be a rigid process of selection which provides better material for the medical profession, but which also causes bitter disappointment to those who fail to secure an entrance to their chosen career. For example, my alma mater each year has about 3,000 applicants for a freshman class which is limited to 170. Successful candidates must have demonstrated their superior ability and industry. No medical student need feel ashamed of his company.

The position of the older men who are already in practice reminds me of a story told about Dr. Osler. When the Johns Hopkins Medical School was fairly well launched, the standard of admission was made so high that Dr. Osler told one of his colleagues in the faculty, "It is a good thing you and I are in this school as teachers, for we could never get in as students."

One advantage of practicing medicine is that it affords an opportunity for the use of all the talents one may possess: charm of manner; facility in speaking or writing; executive, artistic or mechanical ability, and particularly an aptitude for Mark Tapley's gift of being jolly under trying circumstances.

Finally, the medical profession, more than any other calling, offers an opportunity for increasing the sum of human happiness. I quote Dr. Pusey again: "The usefulness of medicine is of that direct sort which makes its values obvious at the time of service. And in this quality of direct usefulness lies one of the solid satisfactions of medicine. We are useful in man's first essential, physical comfort and health."

On the negative side of the ledger are the length and expense of the medical course and the difficulty of gaining admission to an approved medical school. With so many applicants to choose from, it is but natural that excuses for rejecting applications are sought, and one easy way is to decline any young man who has been conditioned in a single subject from his first year in high school on through his college days. The four years in a medical school will cost from an irreducible minimum of $5,000 or $6,000 to $8,000 or $10,000, or as much as the family treasury will stand. And when the medical student has obtained his diploma, his medical education has only begun. A worthwhile doctor never ceases to be a student of new developments, for within five years after graduation most of his textbooks are out of date.

No other profession requires harder work, longer hours or greater responsibility. A doctor is on duty twenty-four hours a day, seven days a week and as many weeks in the year as he stays on the job. Not only must he sacrifice

We had to call off an outing we had long looked forward to.

himself, but his family must endure hardships with him. My wife once told me, when exasperated because we had to call off some outing we had long looked forward to, "I suppose I would marry you over again, but I wouldn't marry any other doctor that ever lived!"

The strain of practice may be judged by the fact that of 173 doctors whose obituaries were published in *The Journal of the American Medical Association* in one month, 100 died of diseases of the heart and of circulation. These are peculiarly diseases of worry or nervous tension.

The practice of medicine must be undertaken largely for the love of it. While no money can pay a conscientious doctor for the sacrifices he makes for his patients, most persons take such service as a matter of course. While one is occasionally rewarded by evidences of genuine appreciation, the ratio in the biblical parable of the one patient, out of ten who were healed, who returned to thank his Savior holds good today; indeed, it may even be a little high.

Still another disadvantage of practicing medicine is the competition offered by public and semipublic health organizations and the meddlesome interference of numerous lay bodies. For some reason, various philanthropists have become intensely interested in providing medical attendance for the middle class, and the private physician in the larger cities has much really unjust competition to meet.

When the Committee on the Costs of Medical Care, financed by a number of wealthy men, completed a five year "study," its majority report recommended what was virtually a form of state medicine: "that the costs of medical care be placed on a group payment basis, through the use of insurance, through the use of taxation, or through the use of both these methods." Unfortunately for this majority, however, the report came out at a time when no sane citizen, not even a politician, would have thought of voting for such an extension of paternalism in government at the expense of increased taxes; the report was what a military man would call a "dud." The reaction of the press, both lay and medical, was overwhelmingly favorable to the minority report, recommending in part that governmental competition in the practice of medicine should be discontinued; that its activities should be confined to the care of the indigent and to the promotion of public health, and that the general practitioner should be restored to the central place in medical practice. Our best magazines seemed to share the opinion of an editor of one of them who, in response to an inquiry as to whether or not he would be interested in an article replying to the majority report of the committee, replied, "We are inclined to doubt whether the report . . . is important enough to justify a second paper."

By way of general advice to the prospective medical student I should say, first, that he should decide definitely, as soon as possible, whether or not he really wants to practice medicine and then he should work to that goal. He should decide, also, on the school he wants to attend and apply early for admission.

One should not undertake the study of medicine with the idea of making money out of it. There is a reasonably good living in it, but every cent is earned. If put into business, the same time, money and brain power should bring in several times the income offered by a medical career. In his address as president of the Congress of Physicians and Surgeons, Dr. Harvey Cushing said of the doctor: "Why he should refrain from forcible collection of his unpaid bills; why he does not patent some of his prescriptions, inventions and discoveries and make a fortune; why he should continue to counteract the spread of diseases he has painfully and at great educational expense learned how to diagnose and treat; why he should so strenuously oppose year after year the efforts of antivivisectionists and antivaccinationists with their Christian science allies to cripple research and to annul statutes already on the books, knowing his calls would increase did they have their way; and why at the same time he should continue to work longer hours for less pay during a shorter life of activity than most people is an enigma to a hardheaded business man."

One final bit of advice may not be popular just now, but I should not be true to my conscience if I did not offer it. It is the fashion nowadays to neglect the classic or cultural subjects in favor of the so-called practical or vocational subjects. Poor old Latin does not seem to have many friends in the educational world today. As one who has been along the road, I want to say that no medical student will ever regret giving all the time he can spare to the study of Latin, English and even Greek and to the cultivation of a love for reading good literature. Later on he will find that these things, like virtue, have their own reward.

The PARENT and the HANDICAPPED CHILD

Ewing Galloway

Study the handicapped child, and try to keep him occupied with games and hobbies.

By

John Ruhräh

CHILDREN who are handicapped in any way fall into three groups, depending on what kind of parents they happen to have. This does not mean a difference in the money that the parent has and can spend on the child; it means the difference in the way the child is brought up and how he looks at his ailment and the world. The crippled child may be neglected, or he may be spoiled, or he may be treated sensibly and correctly.

The first thing the parent of a crippled child needs to do is to learn exactly what he or she has to face. There should be a stock taking and this need only be done once. The sensible parent will not try to make the child's condition either better or worse than it really is. A sensible parent will try to realize fully the responsibilities and will make up his or her mind that the difficulty will be faced with courage and strength.

The first and worst difficulty is self pity. Many parents pity themselves and show it in passing this pity on to their child. If the parent pities the child, the child will begin to pity himself; and that is the most destructive thing to his morale and to his capacity for well being. In place of making the best of his condition, he will spend hours feeling sorry for himself, and he will expect every one around him to feel sorry for him. He will soon become spoiled, irritable, exacting, wanting everything his own way and doing nothing to help himself. In a hospital the other day I saw a little boy whose nurse wanted him to do something. He said, "You ought to know how rotten spoiled I am and not expect anything of me." That was the result of his parents having humored him and of their not exacting obedience as they would, or at least should, from a well child.

Parents who pity themselves are the biggest stumbling block in the way of the education of these children. Once the habit is acquired, it is hard to break, and they become a nuisance to themselves and to every one else. They suffer unknown agonies which they needlessly inflict on themselves. They have a big enough cross to bear without adding their own self pity to their burden.

The second class of parents feels outraged that such a thing as a handicapped child has

been wished on them through no fault of their own. They are liable to worry a bit, and then they shut the child out of their lives and emotions as far as possible and neglect him. They do not seem to care whether or not the child gets an education; they do not seem to feel any sense of responsibility, and they act as though they thought that the community should see that the child is cared for and educated. These parents are a hard lot to deal with; they either will not or cannot assume any responsibility and will rarely extend any cooperation, which after all is what is most needed after the child reaches the school age.

There is a third class of parents who have good, hard common sense. They are quick to realize that they have a problem on their hands, and they set about learning how best to solve it. They acquaint themselves with the type of handicap with which they have to deal. They get the best available technical advice that they can find. They do their best to bring the child up in a sensible manner and do not waste time or energy in bemoaning their fate or that of their child. In writing of doctors and medical students, Dr. John Brown, who wrote a number of stories including "Rab and His Friends," used an expression that I have always liked. He said that pity had ceased as an emotion and had become a motive. Sensible parents cease to pity their child, and in place of this sentimental, useless and destructive thing they substitute a motive, the desire to help their child.

The parent of a handicapped child must first of all make up his or her mind to accept uncomplainingly the burden that must be borne. It will not help any for the parent to pity himself or the child. The second thing that is essential is not to worry about it. Worry is a foul fiend that robs those who harbor it of the best that is in them. One is only called on to live in the present, a day at a time. Yesterday is gone, and nothing that one can do will change anything. As a great poet has put it:

> The Moving Finger writes; and having writ,
> Moves on; nor all your Piety nor Wit
> Shall move it back to cancel half a Line,
> Nor all your Tears wash out a Word of it.

He who carries the burden of yesterday, that of today and that of tomorrow, has a load that will break the strongest. He who carries the burden of the day alone can usually stand up under it. There is no use in worrying about what is going to happen to the child when he grows up. There will be plenty of time to take up that question when the time has come. Planning too far ahead is useless, for conditions change quickly, and all or much of the worry goes for nothing. If it can be done, it is all right to make a sensible provision for the future, but nothing more.

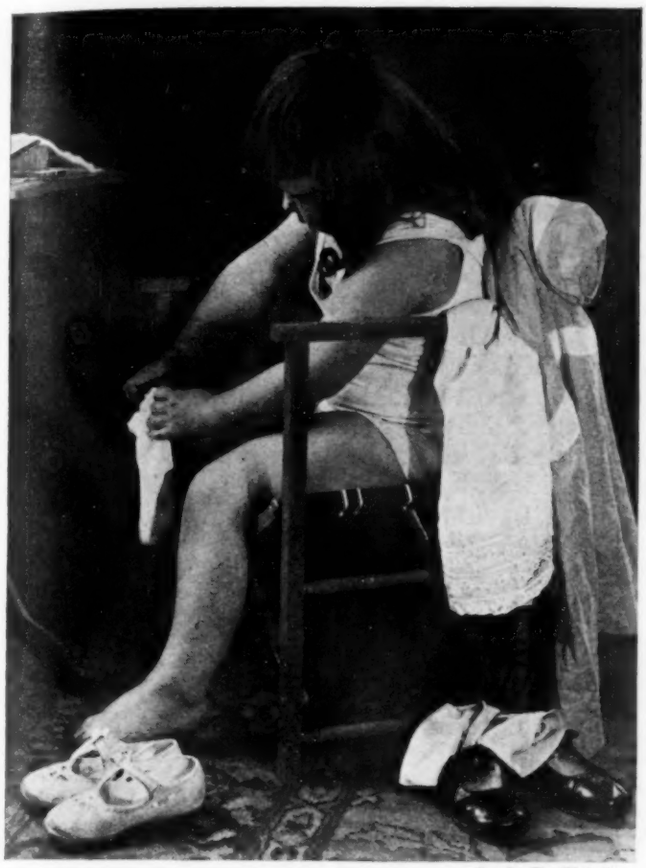
This then is the essential for the parent to learn: Pity and worry are destructive. The less one does of either, the better it will be for every one concerned; and the less one does, the less one will want to do. On the other hand both are habits which grow quickly, and, if indulged in for long, they become fixed and unbreakable.

If the child's handicap is something other than mental, there are certain things the parent ought to know. Mental cases must be considered separately as they present a different problem.

The child must live and grow up, and he can do it in several ways, depending largely on his parents. If he is spoiled, given his own way and indulged daily, he will grow up to think that the world revolves around him and that every one must do his bidding. He will expect especial consideration and fret and cry when he does not get it. The mother says, "Oh, he is a cripple and will have a hard time; let him have what he wants while he can get it. Anything that I can get for him shall be his. His troubles will come soon enough." The parent who talks this way is piling trouble after trouble on her child and is going to make his life a burden when he gets older.

The first thing that the child should be taught is that he is to behave as other children do as far as he is able, taking into consideration his handicap. He should be made to realize that he is not somebody set apart but a person who has to live in the world like any one else. He may have to adjust himself, in fact he must adjust himself. The second thing the child should be taught, as far as possible, is independence. The child should be taught to take care of himself as far as his disability permits. There are many things which every child can do and ought to do for himself. If the mother waits on the child all the time and does things for him, he will never learn to be independent. The parent should find out what the child can do for himself and what he cannot do for himself and then do only the things that are necessary. I have seen well, strong, healthy children of 8 or 9 years of age who could not put on their own shoes and stockings. The mother will tell you that she loves her child and that it is a pleasure to do such things for him. This is a selfish indulgence which will make life hard for the child. I once asked an 8 year old boy how he was getting along at school, and he told me that he did well but that he did not like to have the boys call him "sissy." I asked why they did, and I was told that he could not put his overcoat on by himself. When I asked him why he did not do this, he replied, "What's the use when some one will do it for me?"

Children like to do things for themselves. They get pleasure out of it and should not be deprived of this pleasure. That is one way they learn, not only to do things but to be independent, and crippled children are no exception to



Doris E. Wright

Children like to do things for themselves and should not be deprived of this pleasure.

the rule. It is surprising how easily handicapped children can be taught to wait on themselves. While this is true, the parent should not expect the impossible. I have seen parents insisting that a child could do something that was utterly impossible. One should use common sense in everything and particularly in that which pertains to the handicapped child.

Another thing that is important is teaching the child to make decisions for himself. Do not expect him to make them when the problem is too difficult for him, but in all the things that are within his grasp he ought to be allowed to decide for himself. His decision may be corrected if need be, but he should be told why his decision was wrong and not merely that he must change it. In this way he will learn. Children who are never allowed to decide things for themselves grow up into men and women who have a hard time.

The mother of a certain 15 year old boy who is a victim of infantile paralysis will never leave him for more than a few minutes, for she says he might need something or some one might do something to him. She refused to put him in an institution where he could be treated and could learn independence at the same time, for she declared that he might get sick and that she loved him as only a mother can love an only child who is afflicted. When I attempted to argue with her a bit, a foolish thing to have done, she asked why God had given her mother-love if she was not to use it. I told her that she was using enough mother-love on one poor child to bring up a dozen. As a Scotchman once said, "It is possible to get too much pork for a shilling."

If a handicapped child is to make his way in the world, he must have, first of all, independence and decision. These he must learn by experience; but if he is not allowed to have experience, he cannot possibly learn. Children were not made to be put in glass cases but to live in a world full of trouble and vexation; as one of Charles Dickens' characters once remarked, "Life is not all beer and skittles." The sooner the handicapped child realizes he must live in such a world and must live by his wits, the sooner he will know that his education is an important thing, and he will be eager to learn all he can.

The school will do its part, but the school superintends only a few hours of the day. The rest of the time the child's education is the parents' business although many do not seem to realize it. The child's habits will depend on his mother, or on the person who looks after him. In former days, parents paid more attention to their children, and the child was taught obedience and respect for his elders in a far greater proportion than is the case today. The handicapped child should be taught to be polite and considerate. Because he is handicapped is no reason why the child should make a nuisance of himself. In a well run hospital where handicapped children are being cared for, it is surprising how quickly most of the children learn to be both polite and considerate and to smile. There is no reason why this should not be done in the home, but often it is not; and when it is not, it is the parents' fault. A well known cosmopolite recently remarked that as he grew older he realized how important it was to be agreeable. An agreeable child or an agreeable adult is always welcome, and the disagreeable and the grouchy are not wanted. The child should be taught this. One day a colleague of mine was in my office when a mother and her 6 year old daughter came in. The little girl came over, made a little courtesy, shook hands and made some pleasant remark. I introduced her to my friend, and she did the same for him. "How do they get them like that?" he asked. I replied that the mother was the reason. She had taken pains to teach her daughter manners and also to give her an opportunity to practice them.

Another important fact in this connection is that example is greater than precept. In other words, it is better to set a child a good example to follow than it is to expect him to do what you say but not what you do. I read a little story in a newspaper which was put in as a

child's bright saying, but it was a lesson which I wish every parent could hear and take to heart. The little girl said to her mother, "Why do you expect me to be so polite to you when you are so impolite to me?" That is the best two line lesson on child behavior I know.

Do not expect to control your children if you cannot control yourself. I have had parents complain about the conduct of their children when they themselves behaved like wild hyenas. Of course the children followed suit. How could they help it? I once paid a call on a child who lived in the country far from any neighbors. When I attempted to examine the child, I was greeted by a flood of swearing and cursing which was remarkable in its way. The mother looked a little embarrassed and then said by way of excuse, "I do not know where that child learned such language. He never hears any one but his father and myself." Then she wondered why I smiled.

You are saying to yourselves that I am discussing normal children rather than handicapped children, but I am doing it purposely for one must realize that the handicapped child is exactly like the ordinary child, plus his defect. The point is that handicapped children should be taught to be as nearly normal as possible. They must be taught independence, obedience, agreeableness, decision, reasonableness and all the other things that make life pleasant, interesting and easy.

About a year ago I gave a little radio talk on the will to do. It was only five minutes long and was addressed to the parents of handicapped children and to the children themselves; in it I pointed out that to succeed, one must want to succeed. Most of us just live. We do not make any particular effort in any direction. We take what comes, complain when it is something we do not like and envy the other fellow. Suppose you want to go to the city hall. You start out and go a block, and then something happens and you get turned out of the straight line. If you are foolish, you keep on the wrong road so long that it takes you much longer to get to the city hall or you fail to get there. If you are wise, you will make up your mind to go as directly as possible, and if you have to go around a block because of some obstruction, you at once get back to your shortest way of getting there. That is what handicapped children must be taught and must learn. They have started out in life, and they have a handicap; but this need not keep them from getting ahead.

I want to emphasize the fact that the child must be taught that his handicap is not a brake but a spur. He must not regard his affliction as something to keep him back but something to spur him on. Dubose Hayward, who had infantile paralysis when he was a boy, wrote me that he thought that it was a lucky thing for him that he was thus afflicted, for otherwise he might have been a clerk in a grocery store. His arms were badly paralyzed. He had to do what he could, so he took to writing, and he has written novels and plays which have made him well known and have secured him a comfortable living.

Any child without defects ought to be able to succeed in life, but if a handicapped child is to succeed he must be a real child with grit and determination. This lesson must be taught the child. He should be told that in order to get along, he will have to work hard to show the other children that he can do as well as they. If he works in a field suited to him, success can be achieved by any one who has a reasonable amount of ability and the will to succeed. Many men and women have become well known in spite of having had infantile paralysis.

Far back in history when Egypt was ruled by the pharaohs, one of them, Siptah of the eighteenth dynasty, had infantile paralysis; about the same time Ruma, one of the high priests in the temple of the goddess Astarte in Memphis, Egypt, had a withered leg; and his picture, cut on the surface of a stone and colored with pigments, can still be seen in a museum in Copenhagen. Sir Walter Scott, the novelist, had the disease in 1773. William Little, one of England's best known orthopedic surgeons, had it; and that fact led him to devote his life to helping the lame and the deformed. He was the first doctor to make a study of spastic children. Also on this list of the famous are Noguchi, one of the most noted of the Japanese bacteriologists; Annette Kellerman, the swimmer; Charles Waddle, a writer; Lowell Martin, a lawyer; William E. Moore, the present managing editor of *The Sun;* Arthur Carpenter, managing director, and Fred Botts, manager, of Warm Springs Foundation. And hundreds of others have achieved great usefulness and eminence in the special lines of work. Lord Byron, the poet and adventurer, had congenital club feet, but he found that he could excel in swimming, while other sports were barred to him.

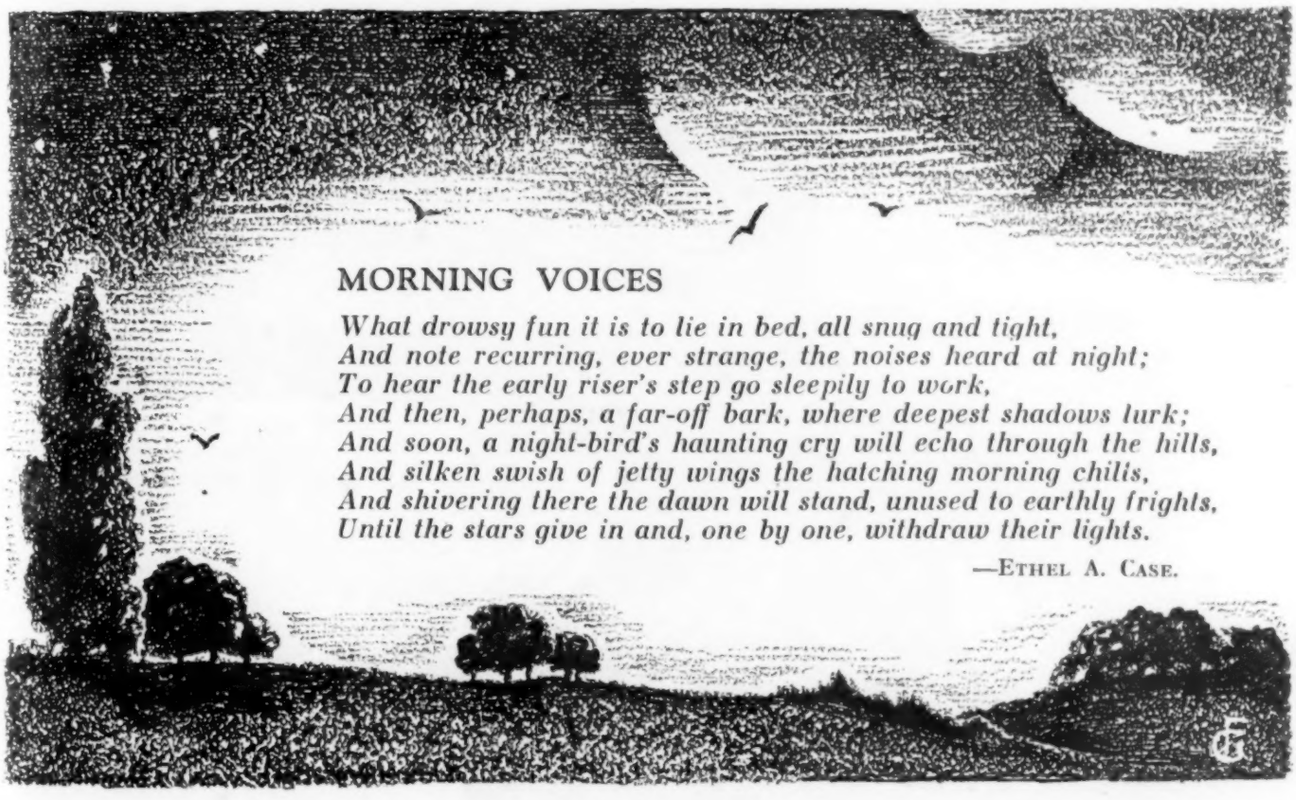
Another man succeeded and became the head of a department for treating spastic children. He works in the medical center in New York and is an example to every spastic child. When he was a little fellow, his father died and his mother was poor and had to take in washing to support her family. He was crippled in the arms, legs and back and could not walk. He could not even dress himself until he was 12 years old; but he had a bright mind, and he determined not only to get along but to do something with his life. It seemed a hopeless undertaking. How he got his early education I do not know; but get it he did, and after that he went to the University of Minnesota where he learned how to do library work and supported himself while he studied. He next went to

Princeton University, where he did the same thing, and then to Yale University for his medical education. He naturally turned his attention to the problem of caring for and helping spastic children and has built up a department of remarkable interest. Not all handicapped children can do this, for many have poor brains as well as poor bodies, but I mention this to show what apparently insurmountable handicaps may be overcome.

President Roosevelt is another shining example of the will to do. Some ten years ago he was badly crippled in the legs by infantile paralysis. He might have sat down in a wheel chair for the rest of his days and bemoaned his fate, but he did not. He went ahead, and now he is President and doing remarkable work.

Idleness is bad and makes children unhappy. Study the handicapped child, and try to keep him occupied with games and hobbies of one sort or another. Stamp collecting is simple for older children, and it may be inexpensive if confined to current stamps and gifts rather than to purchases. Every handicapped child who is old enough should be encouraged to study in school and out. Amusements of any suitable kind are welcome, but judgment should be used. If the child cannot get out, visits from other children can be arranged, little clubs of one kind or another formed and the child's interest aroused in the things around him. Lying in bed or sitting in a chair and doing nothing is a poor business, and only some one who has been through it can realize what it means and also of how much benefit occupation of any kind is to keep the mind free from worry and dark thoughts. Do not expect an idle child to be happy. If the child is not in too great pain, he can and must be kept busy. It may tax the parents' ingenuity and they may have to seek help, but it can be done. If the hands are not affected and sometimes even if they are, the arts and crafts are a wonderful thing. There are books on the subject, and teachers can be relied on to furnish ideas. If the age and aptitudes of the child are taken into account, basket making, weaving, knitting, crocheting, drawing, painting, modeling in clay, making simple jewelry, leather work and a host of other things may be used.

All physically handicapped children need extra rest, which should be a part of the daily routine. Too much exercise is worse than none. Every case has to be considered by itself, and one cannot make any hard and fast rules beyond those of the daily rest in one or more periods and the avoidance of fatigue both of body and of mind. One always has to steer between two things, overexertion and underexertion. This is sometimes hard to do; but with patience and perseverance, much can be learned about what the individual child can stand and what he cannot. All this is the duty of the parents. The school can only look after the child during the few hours he is in school. A great part of the handicapped child's day is spent at home, and this is the most important part of the day.

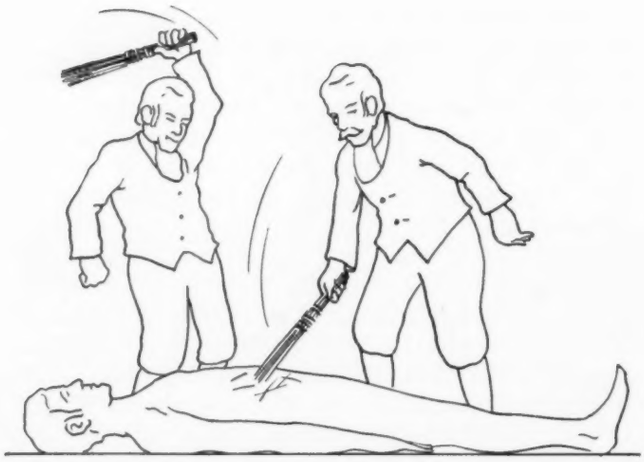


MORNING VOICES

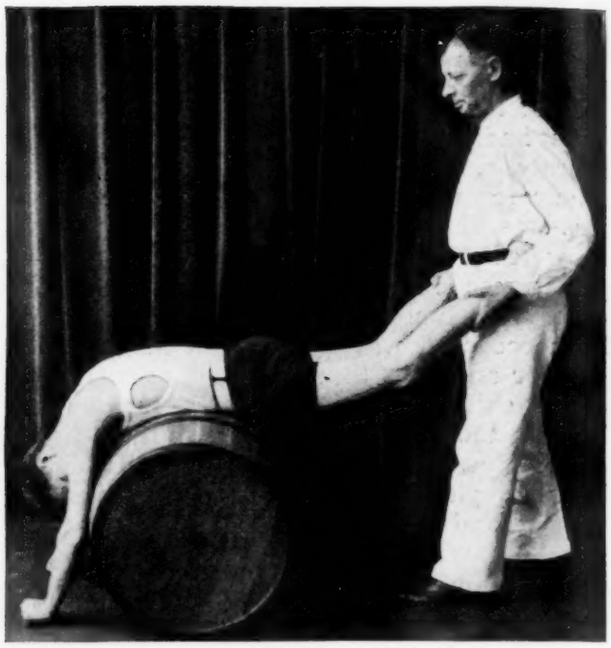
What drowsy fun it is to lie in bed, all snug and tight,
And note recurring, ever strange, the noises heard at night;
To hear the early riser's step go sleepily to work,
And then, perhaps, a far-off bark, where deepest shadows lurk;
And soon, a night-bird's haunting cry will echo through the hills,
And silken swish of jetty wings the hatching morning chills,
And shivering there the dawn will stand, unused to earthly frights,
Until the stars give in and, one by one, withdraw their lights.

—Ethel A. Case.

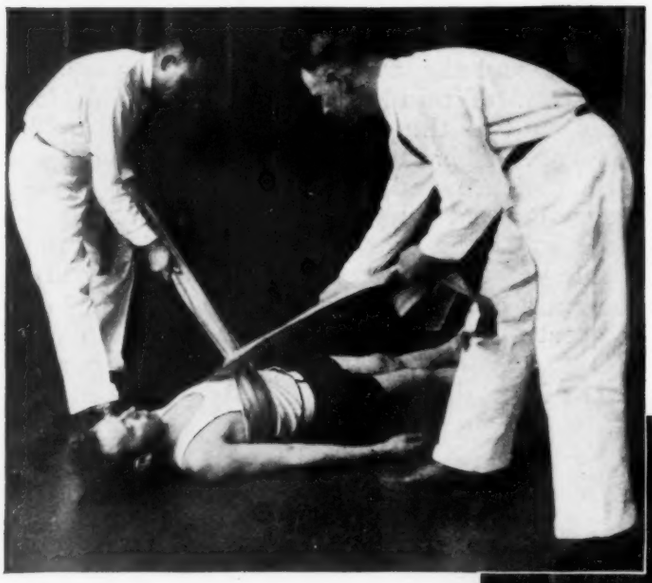
From the Primitive in Artificial



The flagellation method was used in the early ages.

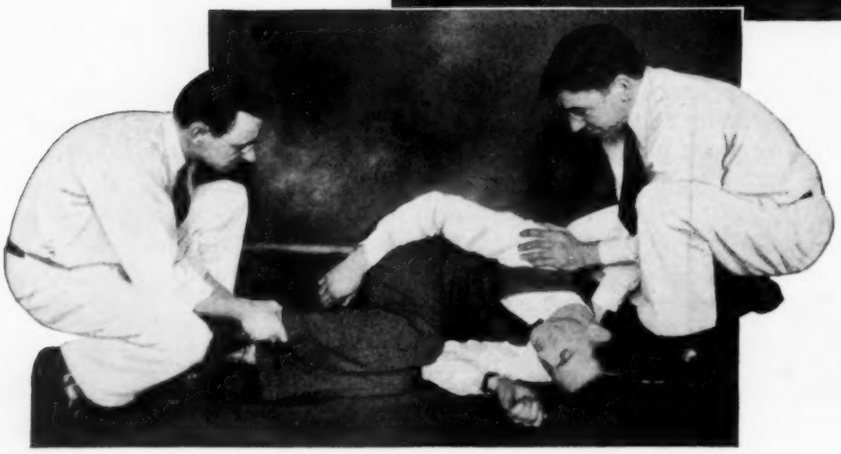


The barrel method as practiced about 1773.



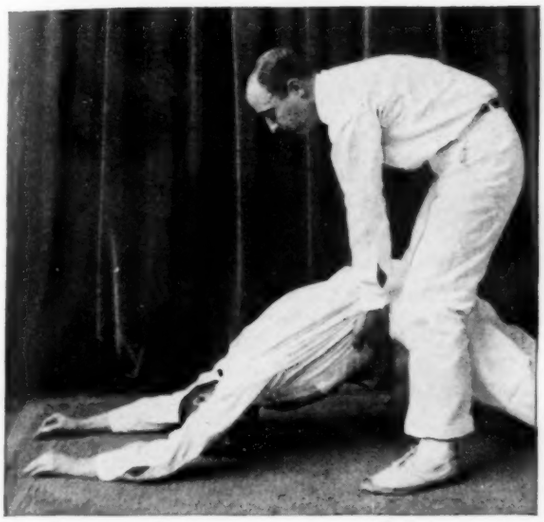
In 1831 the Dalrymple method was introduced.

The Sylvester method was popular in 1861.

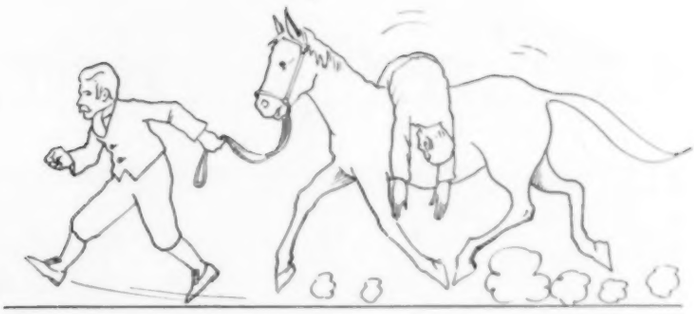


Ten years later the flexion method was introduced.

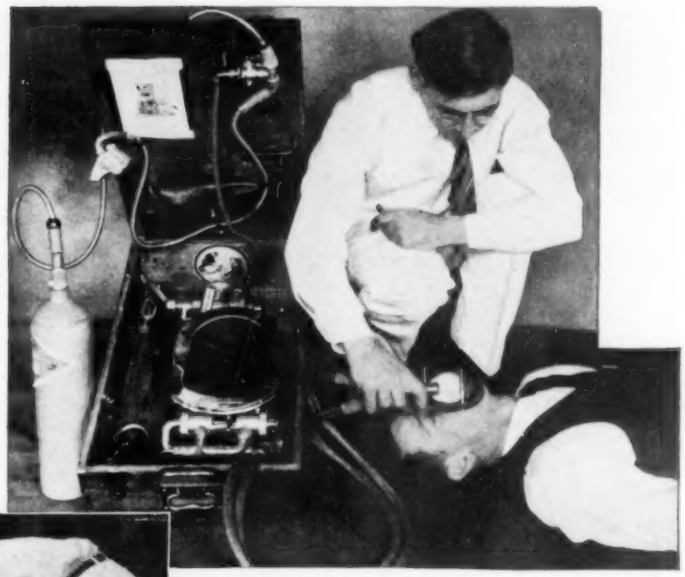
to the Present Resuscitation Methods



The Michigan method was practiced about 1897.

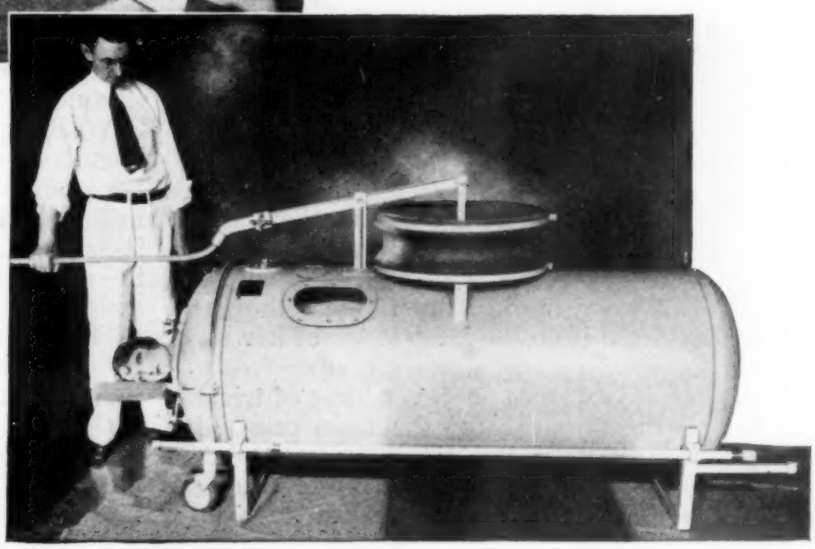


The trotting horse was used in 1812.



The pulmotor was used in 1911, but has given way to more efficient methods.

To the left the Schaefer method, introduced in 1903, is combined with an H.—H. Inhalator of 1922.



The Drinker portable respirator to the right is the modern and the most certain method of resuscitation, having been introduced in 1933.

Photos from A Century of Progress, courtesy Chicago Rapid Transit Company

Luring Junior's Appetite

By

Mabel Worth

Ewing Galloway

Every mother experiences annoyance, if not real worry, when Junior's appetite vanishes.

I AM SURE it is agreed that we all "eat with the eye." Even those who boast that they are not finicky about food will admit in their frankest moments that a daintily served luncheon on immaculate linen with a rosebud in a slender glass vase will tempt them to a lunch of whatever they like least.

Every mother experiences the annoyance, if not real worry, that grips her heart when Junior or his little sister seem to have a vanishing appetite and almost refuse to eat, even though all between meal lunches are eliminated. Sometimes this loss of appetite is caused by the weather, or the child may not be physically quite up to par.

Then it is that mothers exercise their ingenuity. If the child is sturdy and ordinarily well, it is no calamity for him to skip a meal now and then. Every mother must judge the case for herself from intimate knowledge of her own child.

However, it is well to possess a "bag of tricks" for luring the appetites of the little ones. In eating, the child is guided by the eye to a greater extent than is the adult. This is largely due, of course, to the fact that he does not have any specific knowledge of foods or food values or of his bodily requirements for health.

Often for apparently no reason, a child turns against his milk. Some children seem to dislike milk and have to be beguiled with all sorts of wiles to take their daily requirements of it. Serving the milk in attractive containers helps. Colored glasses, sippers, and even ordinary straws such as the soda fountains use often prove interesting for a time. All these devices may fail, of course, and one must continually find new ones.

While a small child may thus be adroitly beguiled, an older one with whom one may reason may learn, and indeed he should, why milk is good for him and why he needs to drink it daily. Older children often take great delight in mixing milk shakes. Permit them to have a small shaker for their own use and to add a bit of sugar, a dash of spice or perhaps a little flavoring extract, and let them play at mixing their own milk shakes.

One may also resort to orange beverages which are splendid in food value and relished by nearly every one. While oranges are best known as a source of vitamin C, which helps

build healthy bones and teeth, they are also a splendid source of vitamins A and B, which stimulate appetite and digestion.

Here is a simple orange and milk drink:

ORANGE MILK FOAM

(Serves one)

6 tablespoonfuls orange juice
6 tablespoonfuls cold water
6 tablespoonfuls milk
1 tablespoonful sugar

Beat or shake thoroughly; serve at once in a large glass.

This is an excellent food-drink for between meals. As an accompaniment, especially for the lunch or after-school treat, try either orange toast brownies or apple straws.

ORANGE TOAST BROWNIES

(Serves six)

¼ cupful orange juice
½ cupful sugar
Grated rind 1 orange
6 slices toast

Mix orange juice, rind and sugar well. Spread on hot buttered toast. Put in oven to brown. Toast may be cut in fancy shapes.

APPLE STRAWS

(Serves one)

1 red-skinned apple
1 orange
Coconut, nuts or dates

Wash and grate apple. Place in a sherbet glass and cover with the juice of the orange. Top with shredded coconut or chopped dates and nuts.

Perhaps reams of paper have felt the impress of printer's ink in extolling the merits of spinach. Many are the jokes perpetrated about this excellent vegetable, and fathers and grown sons, as well as the children, at least pretend that spinach meals are the bane of their existence. Of course spinach is its own reward, but the child cannot know or realize that. And so, glorify spinach! I believe that if the prejudice could be entirely removed and the stigma resting on spinach could be taken away, many persons, both old and young, would relish spinach prepared in certain ways.

For children especially here is a spinach dish to allure the most finicky. One might call it Bird's Nest. It is simply a base of mashed and creamed potato, properly seasoned, with a rounded nest of delicately flavored spinach which holds a temptingly poached egg in the center. If you can find a colored picture of a bird to decorate the child's lunch table, too, he will be happy.

Another variation of this is to make a nest of the potato and place in the middle several small, rounded "eggs" of chopped, seasoned spinach. Any of these suggestions appeal to the child.

The carrot is another vegetable that meets resistance on all sides. The carrot is beautiful in color, and this helps its cause. Try a spinach hill, with a tent of ground raw carrots atop it. A tiny paper American flag may even be stuck in the top of the tent. A boy will appreciate this, I am sure. Chopped nuts and seedless raisins always make the carrot more interesting.

Doris E. Wright

Orange milk foam is a good between-meal drink.

Then, too, carrots may be cooked in star shapes. Wash and pare the carrots, and slice them lengthwise to secure large surfaces. Cut the stars neatly with a small, star-shaped cooky cutter, and steam them until tender in slightly salted water and butter. A cream sauce flavored with cheese and poured over the stars makes this a delicious main dish for Junior. Do not overcook the stars, or they will lose their flavor and shape.

One of the finest desserts for children is gelatin, plain or with fruit juice, or filled with chopped marshmallows, nuts, coconut, fruits or carrot. As a filling for the gelatin, shredded raw carrot blended with shredded pineapple will prove a favorite.

Ice cream should also be remembered as one of our finest foods. Many children never tire of it, and it may be served often. For variation, serve it with fruit. Gelatin of bright colors cut in cubes and blended with cubes of ice cream is delicious for dessert and tempts the child's appetite as well as being a nutritious and healthful food.

She is a wise mother who explains in an interesting way why this or that food should be eaten. Children should be told the truth. Mothers may remind them that all the gold of the sun went into the carrot to give it that beautiful golden color and that such gold is a wonderful food for children.

As variety is the spice of life, so variety in foods and food service is the lure that tempts frail appetites!

THE FOLLY OF PHINEAS FOPP

More Truth Than Fable

BY W. W. BAUER

A MAN'S YOUTH does not last forever. Phineas Fopp was finding that out. Not that Phineas was any less Natty than he always had been; only his Hair was growing Thin and his Shape was getting Thick, and altogether Phineas was Slowing up and Fraying at the Edges. He noticed that the Girls would still accept Dates for dinner, because Phineas could order a Meal; but when it came to Dances, they were choosing Younger and Snappier boy friends. At that, Phineas didn't look as if he was Crowding 60, although that was the fact. He still passed for a middle aged Bachelor, but he could see that it wouldn't be Long before they would put him away in the Mothballs among the Old men. That would never Do.

For more Years than he cared to think about, Phineas had been Beauing the girls. Some of those who had danced with him in their Youth now had grandchildren, but Phineas still had a bright and glittering eye on the Second generation. Privately, those of his own Age thought he was off his Nut; but being mostly polite people, they said Nothing. The girls Giggled about Phineas behind his Back and Ducked out of sight when he was looking for a Dance partner. However, when it was time to Eat they Stuck around, because Phineas was an Epicure and he was not afraid to spend his Money. Also, he had plenty of the filthy Stuff to spend.

He dreamed that he was Leaping over fences.

All this was not satisfactory to Phineas, and he looked about him for some Way to make matters more Interesting. Phineas, in fact, came to the conclusion that he would get himself a Wife. His Mirror reassured him that even with the Thatch looking threadbare in spots and the Paunch showing a decided tendency to Sag, he might still get away with ten or fifteen years Less than his real Age. His face had been kept Smooth by plenty of attention from the Barber and not too much Effort at thinking. The color of his Hair was still Fast. However, Phineas didn't feel as young as he Looked. In fact, if he Looked at himself early enough in the Morning, he sometimes wondered whether he Looked as old as he Felt or Felt as old as he Looked. So he had his Breakfast sent to his Room and stayed out of Sight until later in the Day when he began hitting on all Six. Phineas decided it would be Hard to put it Over on a Wife. Something had to be done about That.

Naturally Phineas wasn't Keen about having anybody Wise to the fact that he was older than he Pretended, although Everybody that was born more than Thirty years before knew all about it. He couldn't take this Problem to his doctor, because he had a sneaking Hunch that the M.D. would tell him not to be an old Fool and to Act his Age. So Phineas decided he would go Sleuthing on his Own. He had read Something about Glands and that they had a Marvelous influence on how the Machinery Clicked, and he had read how modern Science had made enormous Strides toward solving the Mystery of the fountain of Youth. First he Tried the medical Literature in a big medical library.

Phineas soon decided that as Far as he was concerned, reading Medical articles was the Bunk. Always when he got to where it Looked as though he might find out Something, he ran Smack into a word with which he hadn't even a Speaking acquaintance, to say nothing about being Familiar with it. By the Time he got the word Dug out of the medical Dictionary, he had lost his Place in the article or he had to go back and read it over again to get the Connection. He soon decided that it was a Punk idea to read up on medical Subjects, because even when he wrote down the meaning of all the Strange

words and then read the article over again it didn't mean Anything to him. So he beat it out of the medical library and went over to the Public Library.

The card index didn't help him Much, and he hated to ask Questions of the young Women at the files after the Way the girl at the Medical Library had looked at him, or at least the Way he thought she had Looked at him. It took him a couple of Days to find what he wanted, and then he Stumbled on it by accident in a Magazine in the Reading Room, where he had gone to read Detective stories while he rested what passed for his Mind. He read the magazine Article with his eyes sticking Out so far that they could have been Knocked off with a Stick. Then he hustled for the catalog room to get the books written by the Same author. He didn't go to Sleep at all that Night, except when his Head nodded over in spite of himself. When he finished the Book he was reading, he went to Sleep at last, just before Dawn, dreaming that he was at a picnic and was Leaping lightly over fences and Brooks to show the crowd how Spry he Felt. He waked up feeling Older than ever and looking the Part.

But he had the great Idea. All day long it kept Buzzing in his head. Glands. Yes, sir. Little glands with big Jobs. Did he feel old and Worn? It must be the Glands. Was his Blood pressure too High? Slow up the glands. Was it too Low? Speed up the Glands! Was this wrong? Take out a Gland. Was something else Missing fire? Put in a new gland. Had not great Surgeons proved it? Did not famous Personages testify and Write about it? You tell 'em, they did! Ponce de Leon was a Piker! Phineas wasn't quite clear about it All, because he had a Way of getting the names of the glands mixed up, but what of that? He was going to find a Specialist, and it would be up to the Specialist to know. That was what Phineas was going to pay him for. Phineas knew he would have to Pay; but if he had known How much, his Glands would have been Speeded up without the famous Operation.

The next question was to find the Specialist. Again he couldn't ask his Doctor, because he knew what he would be Told. His doctor was one of those Medicos who tell the Truth and who don't use Three words when Two will Do; Phineas kept on going to him because he knew his Stuff, even if he wouldn't bother to Jolly his patients Along very much. So Phineas went back to the Medical library, and after a long Search he found what he was looking for. Of course, the Name of the specialist was used in an Article telling the Profession that Rejuvenation was Five Star Bunk, but Phineas wasn't worried about That. He figured that was because of professional Jealousy. Anyway,

He looked like the Tail end of a misspent Life, but he wouldn't give Up.

Phineas had Decided to go ahead; and nothing was going to Stop him at that late date, because Phineas had Met the girl he wanted to Marry.

Not that Phineas had fallen in Love. He was too old a Bird for that. He had Simply gone out and Picked himself a Wife that would Make a gingham Dress look like a party Gown. She didn't even Suspect what was Brewing. So Phineas finally went to the Big City and found the Specialist. It wasn't long before he was back in the Home town, with his Pocketbook lighter by about a Grand, not counting the Hospital bill and what he had spent on the Trip. He didn't feel any Younger, and the first old Friend he met, a Woman with whom he used to dance who was now the Mother of two fine daughters who Never had any time for Phineas, looked at him and said, "For Goodness sake, Phin, what have you Gone and Done to yourself? You look Terrible."

Phineas ducked and Blinked, and went Home to look himself over in the Glass. He had to Agree with her. He did look like the Tail end of a misspent Life, but he wouldn't give Up. He had made his big Bid for Youth, and he was going to get his Money's worth. It wasn't until the middle of the big Dance that was pulled off about a Week after he got home that Phineas gave up. He managed to Drag himself out of the hall, after trying to Act like a Heifer in the Springtime, and went Home to bed. He called his own Doctor, closed his ears to What he was told while the Prescriptions were being written, and turned his Face to the Wall for the good long Sleep that a man his Age needs.

[NOTE.—Another of Dr. Bauer's "fables" will appear in an early issue of HYGEIA.]

MORAL: There's no Fool like an Old Fool

As the Twig Is Bent

By
Louise Price Bell

Matterns'

"Mr. 4 Year Old" should know how to wash his face and hands and brush his teeth.

"HOW DID you ever teach Patsy and Jack to brush their teeth after every meal?" asked Mary. "I have been here a week, and I don't believe either of them has forgotten it once!"

"Oh, it's just habit," replied Evelyn. "Ever since they were babies, I have taught them that cleaning their teeth was directly associated with their meals and bedtime, and now it is just a matter of routine with them. It's like everything else. After one once acquires a habit, it is almost like second nature."

How true that is. The certain little acts which we find ourselves repeating day after day are really nothing more than habits formed from doing the same things over and over. Some habits are formed after we become adults, it is true, but most of them are traced to early training; for at the best, that training leaves its marks. The psychologic time for the formation of correct habits, then, is in childhood, and the more careful the nurse or mother is in training the child in right habits the more satisfactory will be the results. Moreover, one cannot begin too young! Educators as well as intelligent mothers themselves have proved that every child can possess a substantial number of correct habits by the immature age of 4 years, if he has been fortunate enough to have the proper guidance in that direction.

These habits are mostly concerned with health and ethics—factors that will tend to make the child a better member of the family and a more useful part of his little circle; they are the habits that will give him confidence and courage and that will broaden out as he develops further.

First of all, a 4 year old child should have formed the habit of eating all the food that is put before him and of eating it without fussing or dramatics of any kind. The mother's responsibility is to see that he is given the proper food in proper amounts—and that it is

attractively served. Too much stress cannot be placed on these two points, for if a child is given a large quantity of some new food which he has never eaten before, a revolt is readily understandable. Or, if the most delicious food, messily arranged and more or less mixed up with some other food on his plate, is served lukewarm and on a chipped or ugly plate, he will not be much different from his parents if he shows disinterest. How many of us relish food figuratively thrown at us? Often a child's aversion to some particular food can be traced to the unattractiveness or the quantity of its first serving. If the food is properly served, however, and the child dawdles or refuses to eat, it should immediately be taken away from him and nothing else should be given until the next meal, when without doubt he will eat the same food without further ado!

Every 4 year old should go to bed regularly and should learn that bed means sleep—not a drink of water, another blanket or an adjusted screen—but sleep! Some mothers give their children toys with which to play when they put them to bed; others put them in their beds with their toys for a playtime spell. This is a poor practice and one which gives birth to many of the "hate-to-go-to-bed" children; for, after associating toys with bed, it is difficult for the child directly to reverse his trend of thought and associate sleep with bed. On the other hand, if the child is put in bed only when it is time for his nap or his bedtime, the mother's problem regarding his sleep will no doubt be solved.

Not long ago, while I was calling on a friend, her 3 year old son awakened from his nap. She brought him into the living-room to dress him; and when he asked to put on his own shoes and stockings, his mother laughed and said that it would take much too long.

"Don't you ever let him try to put them on alone?" I asked.

"Oh, I did once, but it took so long and he got the stockings all twisted and then got cross and cried. He has plenty of time to learn to do that," she added confidently.

But what a mistake! The child, eager to learn to establish correct dressing habits, was being combated by the very person who was supposed to hold his training most seriously. Certainly, a 4 year old child should be able to do much toward lightening the mother's load at "dressing time." All that is necessary is more patience than my friend seemed to have, for I have yet to see a child who is not intensely interested in learning to dress alone. Of course it takes Mother's time at first, and Baby will bungle things dreadfully; but in the end the results will be more than worth all the patience exerted, for besides being able to dress himself, the child will have acquired a sense of responsibility which in itself is most valuable.

By the fourth year every child is learning either to dress himself or not to dress himself; that is, he is learning to button the easy buttons, pull on his stockings and straighten them somewhat, or he is learning to wait for some one to do these things for him, which only means that he is learning to be helpless. He should know how to wash his face and hands and brush his teeth and should already have the habit of washing before meals by himself. This alone is a great help to the mother, particularly if she does not have a maid, for there are always many things to be done at mealtime, no matter how carefully one plans beforehand.

"Mr. 4 Year Old" should use his handkerchief when necessary without being reminded of the necessity. He should use it correctly, being careful to replace it in his pocket when he is through with it. Every one knows the wild things which children are inclined to do with a handkerchief unless they are taught how to use it correctly; every one laments the lack of training that children seem to have along this particular line. I once taught in a kindergarten where although the children came from good homes, for some unknown reason they were absolutely lacking in "handkerchief technic." After seeing the handkerchiefs used for everything imaginable, from a napkin under their lunch of animal crackers to a mop for the floor and an eraser for the blackboard, I decided to try and teach them the proper use. So one

Doris E. Wright

Besides being able to dress himself, Baby will have acquired a sense of responsibility.

morning when we were happily talking about various health habits, I asked:

"What are handkerchiefs for?"

"To match your dress" was the first retort. "To lend some one!" "To keep in your pocket." One or two said "to wipe your nose," but it was plain that they had never been taught any sanitation in regard to the article. However, it was no time at all before they were using their handkerchiefs properly and seemed proud of the knowledge. I suggested that they have a fresh handkerchief daily (as I have continued to suggest to my own children), for even though it may increase the laundry bills slightly, still it so firmly fixes the habit of cleanliness along that particular line that there is little danger of the use of exceedingly soiled handkerchiefs.

"Hang up your coat, Bobby!" "Take your things off that chair, Irene!" These are familiar sounds to many of us. On investigation, however, we often find that Bobby and Irene did not hang up their coats or hats either because the hooks in the closet were entirely out of reach or because they could be reached only after a discouraging struggle. If a low hook is provided for each child at an early age, he will form the habit of hanging his wraps up when he is still a mere baby and will continue without further attention. In the words of my friend, it will become second nature to him. Here again, the mother has a certain responsibility. She must be sure that every article of clothing to be hung up has something by which it may be hung so that the task will not be too discouraging to the young child. Small hangers can easily be sewed on the inside of the cap and the coat, and Mother should show the little one just how the articles should be hung before he attempts to hang them himself. If, after hanging one article, the mother has the child do the same and a race ensues, the element of play will tend to make the habit an enjoyable one to the child. In this way, the child will understand just how it should be done, and any chance of the clothes being left in a heap because of lack of knowledge will be eliminated.

A child should learn early in life to come when he is called. But parents should be considerate and never insist that a child leave in the middle of some project which to him is all absorbing. A sand house in the process of construction may not look like much to us, but it is just as important to the child as some of our pleasures are to us; in addition it is far too constructive a job to be lightly treated. One or two minutes does not make a great deal of difference, and it is far better to say, "Lunch is ready, Billy, come in as soon as you get your house built," than to insist that he leave when his interest is at its height. Children appreciate this respect of their "work," and if at any time the child stays longer than necessary, a reminder is usually all that is needed. Furthermore, the wise parent calls the child only when necessary; for who can blame a child, who, imposed on by repeated and needless calls from his play, learns to ignore the call?

Recognizing the rights of others is an important habit to form during early childhood, and whether it is classified as a mental or as a physical habit makes no difference. Even a young child should understand what the rights of others mean and have unselfish habits in his play, for the earlier he learns the "give and take" of life, the earlier will he be fitted to meet situations fairly and squarely. Many children are fascinated with magazines and books, and their desire is to take them from tables, racks or shelves, look at them and then in many cases, tear them. The books are attractive to the child, and unless he is taught that they belong to some one else, and his own books are substituted for them, he cannot be blamed if he is free and careless with them, either in his own or in some other home. It is so easy to have one shelf or table in which the older magazines and some of the children's books are kept and to call the children's attention to these when an attempt is made to touch the others, that one wonders why it isn't a universal custom! A smile and a remark such as "These are your books, Billy," is only necessary a few times before Billy thoroughly understands. If a new picture book is occasionally tucked in with the old ones, his interest will be kept alive in his own books; this in turn will mean lack of interest in those belonging to others, and thus another good habit is formed!

Since the modern mother has her baby thoroughly trained in toilet habits early in life, it is unnecessary to dwell on that habit here, though we must remember that no elasticity should be allowed in that important health habit as the child grows older and play calls him urgently. A habit well formed must not be allowed to stagnate.

If the habits have been well started, or better still well developed, by 4 or 5 years of age, the child will gradually gain more and more control and will soon reach the really helpful stage. Some children naturally make more progress than others; some make more rapid progress with certain habits than others, but parents must always recognize, stimulate and encourage desirable beginnings, no matter how small they may be. Praise is often an incentive to a backward child, so let us not be miserly with that. And let us remember that when we start to guide a child in his habit formation, for the child's sake we must not relax our vigilance for a moment. Too much depends on right habit formation for the process to be so lightly treated. As parents it is certainly our duty to do our best to "train up the child in the way he should go," so that "when he is old he will not depart from it."

It is suggested that the shaving of the head and the wearing of a wig were imposed by the head louse.

The HEAD LOUSE

Chapter V of

Our Parasites

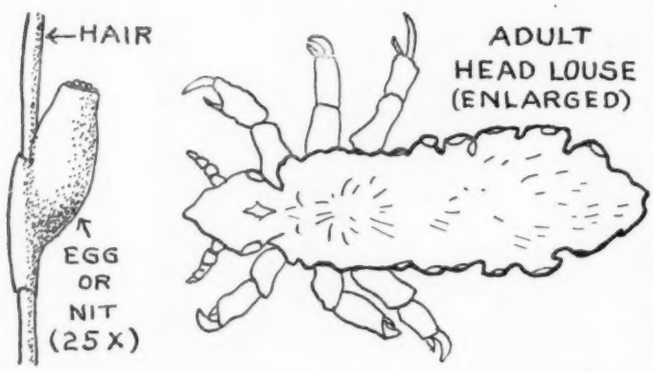
By CLAUDE LILLINGSTON

THE HEAD LOUSE, like its cousin the body louse, may have possessed wings some time in its remote past. However that may be, the head louse of today is earth bound. According to Professor Patton, this louse belongs to a more ancient race than the body louse; but ancestry and pedigrees, where lice are concerned, are surely of little more than academic interest.

Not so long ago, little or no distinction was made between the head louse and the body louse, and Linnaeus called them both by one name, Pediculus humanus. If there were differences, he evidently considered them too small to justify the assumption that there were two distinct species. Since his time, much has been done to clear up this point, and many seemingly constant morphologic differences have been noted as distinguishing the one from the other. Although the two belong to distinct species, they are closely enough related to interbreed under certain conditions.

The main differences between the head louse and the body louse are as follows: The head louse is the smaller; its head is shorter and more blunt; its eyes are smaller, and its legs are shorter and stouter. The head louse is also darker than its cousin, but the two share the ability to camouflage, to adjust their color more or less to that of their host in an easily comprehensible endeavor to escape attention. It is not known how this change of color is brought about; it may be the sort of quick change effected in the dressing-room of a theater, or a gradual change that requires several generations for its completion. The truth is doubtless to be found, as usual, somewhere about midway.

Although the normal habitat of the head louse is the head, it sometimes can be found in beards and eyelashes. It prefers children to



adults as hosts; girls are preferred to boys, doubtless because of the superior cover provided by the long hair of girls. The back of the head and the parts above the ears are the louse's favorite haunts. Dr. A. E. Shipley points out that the young men of Sparta who oiled their long locks before going into battle probably did so to keep off the head louse. Many centuries later, other tactics were employed; and during the World War, soldiers' heads were often shaved to gain the same objective. It has been suggested that the shaving of the head and the wearing of a wig, favored by our ancestors at the end of the seventeenth century and the beginning of the eighteenth century, were habits imposed by the head louse. The powdering of the hair, so fashionable at one time, may also have had its origin in the troublesome attentions of this parasite.

The head louse is one of the most cosmopolitan of our parasites. According to Dr. Sobel, in the period from 1909 to 1912, about 22 per cent of the school children in New York were infested; from 150,000 to 185,000 cases were reported during this period. This parasite has also been a great nuisance in the schools of Oslo, Norway, since the World War, although the percentage of cases was much lower than in New York. This high degree of infestation is largely due to the ease with which a head louse migrates from one head to another. Only momentary contact with the head of a lousy person is necessary; and if the would-be migrant cannot achieve his purpose while school children sit close together at their desks or in some conveyance, there are always the opportunities afforded by those changes of hats and caps which even the most exclusive and unsociable school child cannot always avoid.

The span of life of the head louse is a month or somewhat more, reckoned from the day it comes of age. About twenty-four to thirty-six hours after this event, the female begins to lay eggs, laying as many as nine a day. According to Professor Nuttall, she may under natural conditions lay from 275 to 300 eggs before old age overtakes her. To do so, she must of course exceed the one score days and ten usually allotted her. The eggs, or nits, are smoky-brown, oval, glistening bodies, commonly attached to a hair about ½ inch from its root, although they may be found much further from the scalp than that. The host is often a pale, poorly nourished, dirty and miserable child. These characteristics are merely the outcome of those unhealthful conditions at home which, among other things, have enabled lice to settle on the scalp.

Anchored to a hair by a sticky fluid which quickly hardens, the egg hatches in about a week at a temperature of from 32 to 35 C. (89.6 to 95 F.). After several molts, the young louse reaches maturity on about the seventeenth day. Under natural conditions, it feeds frequently and discharges its dark excreta on to the hairs, helping thus to convert them into a tangled jungle. According to Professor Nuttall, the life cycle from egg to egg is as follows:

Egg stage	7 days
Larva	4 days
First nymph	3 days
Second nymph	2 days
Preoviposition stage	1 day
Total	17 days

It is probable that the head louse is capable of transmitting typhus fever, relapsing fever and trench fever. There are also many skin diseases provoked or made worse by it, such as urticaria, eczema, pyodermia, pruritus, impetigo contagiosa and folliculitis. This tedious list might well be considerably prolonged, were it a matter of ticking off all the ailments of the skin for which the head louse may be held responsible. It has even been accused of provoking meningitis; the exasperated child keeps scratching his head till sores form and become the portals of entry of germs causing meningitis. Other sequels to an invasion of the head by lice are sleeplessness and the social disgrace that follows the publication of the discovery of lice and nits in the hair.

There are effective ways of preventing the advent of the head louse by treating the hair with oil or some vermin powder or by keeping the hair closely cropped. Once the head louse has dug itself in, and its host, particularly if she is a girl, does not want to look like a soldier going into battle with locks shaven or shorn, more radical measures than the application of oils and fats are desirable. The nit, securely anchored to a hair, is not promptly dislodged by oils or even by soap and water. It is necessary to employ some fluid that easily dissolves the cement by which the nit is attached to the hair. Vinegar is a useful solvent for this purpose.

A reliable procedure is to wash the head and hair thoroughly with equal parts of kerosene and vinegar. Great care should be taken with such an inflammable substance as kerosene. The head is now kept wrapped up in a towel for several hours. The kerosene having killed the adult lice, and the vinegar having detached the eggs from the hairs, all that remains to be done is to remove the dead lice and the eggs

with a fine-toothed comb and to wash the kerosene and vinegar out of the hair with soap and hot water. It is well to comb the hair, strand by strand, with a special comb made of thin blades of toothed steel or brass, riveted together in such a way that the space between the teeth allows the passage of only one hair at a time. If such a comb is not available, any fine comb will do.

Another useful mixture is one containing equal parts of kerosene and olive oil. After the mixture has been well rubbed into the hair and scalp, the head is kept wrapped in a towel overnight. Vinegar is applied the next morning, the eggs are removed with the help of a fine comb, and the operation is completed with a thorough washing in soap and hot water. If necessary, this process may be repeated on two or three consecutive nights.

More drastic measures may be unavoidable when the child lives in such dirty surroundings that reinfection is only a matter of time, and a short time at that. The head must then be kept closely cropped, if not actually shaved. Before resorting to such drastic measures, the persons concerned should take stock of the situation and see whether a wholesale delousing of every member of a family is not feasible. The shaven head is not only a serious blemish for the child, but also an ever present, tacit confession of defeat on the part of all concerned.

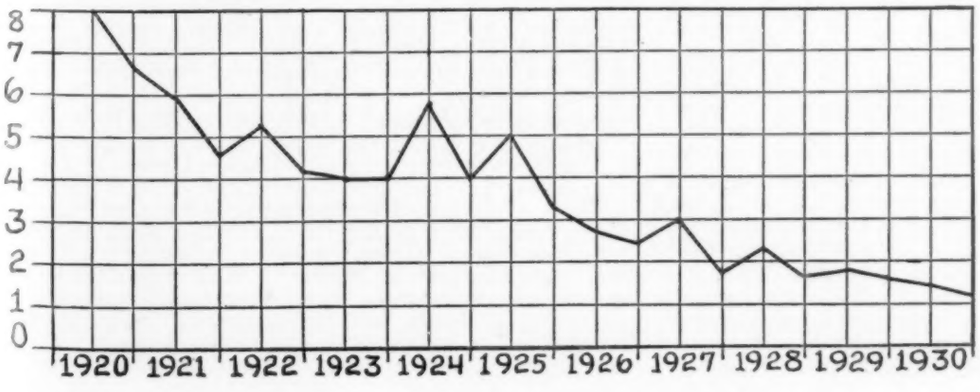
A remarkable account of what can be done in this field by concerted action has recently been published by a school medical officer in the journal of the Norwegian Medical Association. The school medical authorities in Oslo came to the conclusion some years ago that the campaigns usually waged against lice are liable to be far too desultory and half-hearted. A child was found to be lousy, hands were held up in horror, the lice and nits of this particular child were destroyed, and the world went complacently on its way. But it was still lousy.

This happy-go-lucky attitude was revised when, soon after the World War, the school medical service of Oslo was reorganized and centralized. The louse problem had for many years caused serious trouble, and in 1920 an organized louse drive on methodical and scientific lines was instituted. Continuity was its guiding principle. The school nurse was set to examining every school child for lice twice a year, in spring and in autumn. When lice or nits were found, the child was given a notice about them in a sealed envelope to take home. The parents were thus informed that lice had been found on their child, and they also received printed instructions in simple language, showing what they were to do to delouse their child at home.

About a week after the parents had received this letter, the school nurse examined the child again. If lice were still demonstrable, she called at the child's home in person and had a friendly but plain talk with the mother. If this visit failed, delousing was carried out at the school, an ignominious proceeding for the child, and one which was, therefore, deferred until every other persuasive effort had failed.

Corporate bodies keep as watchful an eye on each other as do individuals. We are, of course, never jealous, but whether we be corporate bodies or individuals, we dislike having an inferiority complex imposed on us by the superior achievements of our neighbors. So the school medical authorities of Oslo made lousiness one of the criteria by which the comparative merits of the various schools were judged. A record having been kept by the school nurse of her spring and autumn examinations, it was transmitted by the school medical officer to a central office where the records from all the government schools in Oslo were collected and analyzed.

The results of this analysis were communicated to every school so that its staff, including teachers, school medical officer and school nurse, should know not only what was the state of affairs in their own school but also how it compared with that of every other school. This analysis showed the actual state of affairs and also the tendency in each school to become cleaner or dirtier year by year. The list of schools published in the order of their lousiness in 1931 showed that at the head of this list there was one school in which not a single louse in a single child had been found in the first half of the year. The scholars must have been almost insufferably priggish in their universal cleanliness. At the bottom of this list came a



The percentage of lousiness in the 24,768 school children of Oslo, Norway, was reduced from 8 to 1 per cent in ten years.

school in which 7 per cent of the pupils had been convicted of lousiness. The reputation for being literally the lousiest school in the town must have been excessively galling to the staff as well as to the scholars, more particularly because in the previous year, 1930, only a little more than 1 per cent of all the scholars in all the schools were convicted of lousiness. It is a far cry from 1 per cent to 7 per cent.

As the accompanying graph shows, this organized drive against the louse has been remarkably effective. In 1920, 8 per cent of the total of 24,768 school children in Oslo were lousy. In the following years, the decline in lousiness was almost uninterrupted, and only in 1924 and 1925 was there a slight relapse, which was due, in all likelihood, to the overcrowding and other insanitary conditions following an increase of unemployment during these years. Only a little more than 1 per cent of all the school children were convicted of lousiness in 1930.

Perfection is hard to achieve in any sphere, and it is doubtful whether it will be easy for Oslo to attain a degree of lousiness in school children much below 1 per cent. Lousiness is to a great extent an accompaniment of poverty, and the poor are always with us. But poverty is not the only factor. Everywhere there are homes where the parents are too lazy and too mentally defective to keep out the louse. The school authorities may successfully delouse the individual school child, but as long as his environment remains lousy, the results of their efforts are liable to be ephemeral. Bringing down the incidence of lousiness from 8 to 1 per cent in a single decade in a city such as Oslo is a wonderful achievement, and the school health authorities can hardly be held to blame if they find that it is as difficult to eradicate this remaining 1 per cent as it is to empty the last drops of treacle out of a jug by the force of gravity alone.

[NOTE.—In the November HYGEIA, Dr. Lillingston will continue his discussion on "Our Parasites." His next chapter will deal with the body louse.]

THANKS GIVING=THANKS LIVING

HYGEIA Points the Way to a Fuller Appreciation of Health

For fifty years the world has had the benefit of the relief from pain that is afforded by the anesthetic action of cocaine, for 1934 marks the fiftieth anniversary of that significant discovery by Dr. Carl Koller. *Dr. James E. Lebensohn* gives the dramatic story of that discovery and shows further developments in the field of anesthesia. "In surveying this semicentenary of local anesthesia," he writes, "medicine is indeed proud of the progress achieved."

"Prenatal care is the training period for the pregnant woman champion," declares *Dr. Edward Lyman Cornell* in an article, entitled "Prenatal Care," in which he stresses the importance of "going into training" for the task of child bearing.

Florence Harbaugh Diamond found out through her own planning of meals for a diabetic husband that "good things to eat can be prepared, and a large variety of dishes from which to choose can be assembled, so that the meals will not have a sameness from day to day." "In time," she writes, "the gloom and despair which had enveloped us when first we learned that my husband had diabetes were only memories of the past. My husband was enjoying his diet meals, and I was having great fun working out new dishes for him. . . . Once you get into this game of planning new dishes of low carbohydrate content, it will fascinate you, and new dishes will tumble over themselves trying to get on your table."

Mothers of overweight children will welcome *Ellen Grindell's* article, entitled "If Your Child Is Overweight," for in it are given complete diets and various suggestions, made by a psychiatrist, for dealing with this problem.

In his series of articles on the eye, *Dr. Hyman Cohen* comes to the important chapter, "What You Should Know About Eyeglasses." His discussion of the subject will help to clarify many points in regard to optical defects and examinations and the invaluable service which properly fitted glasses render.

"Every growing child," says *F. F. Smith, D.M.D.*, in his article on "The Parent, the Dentist and the Child," "has the right to develop properly, physically and mentally, and, as the two processes often occur simultaneously, the thoughtful parent will see to it that no obstacle is left in the road to health. Dentistry today is concerned more with prevention, which is cheap, than it is with mere restoration, which is expensive."

"High pressure salesmanship should have no place in selling vegetables to the family, for it develops sales resistance," *Mary C. Brown* warns in her article, "Selling Vegetables to the Family." "The logical and successful way is to make those vegetables so attractive that they literally sell themselves." Mary Brown includes in her article some suggestions and recipes that contain the secret of success in this field.

Common Sense in Mouth Care

By

W. M. Gardner

This filling encourages the lodgment of food because it does not contact the adjoining tooth. Also, the overhanging portion of the filling irritates the gum.

IV

TIME FACTOR IN BRUSHING

TIME IS an important factor in cleaning teeth and maintaining healthy gums. The minute or two spent by the average person in hastily and thoughtlessly applying a brush and a dentifrice to easily accessible surfaces of the teeth, in many cases without really a thought of cleaning them, is in a large measure responsible for the unhealthy and unclean condition of his mouth.

The tidy housewife spends much more time in carefully washing thirty-two dishes, one by one, than she does in brushing her teeth. When washing dishes, she sets no definite time but keeps at them until she knows they are clean. It would seem logical that the thirty-two teeth of a permanent set are much harder to clean thoroughly than an equal number of dishes and that their cleanliness is of greater importance.

Teeth should be brushed until they are clean. The length of time varies somewhat with the individual. As a general rule, three minutes twice a day is sufficient for the person who has regular teeth and no disease of the gum tissue. Brushing teeth is a rather tedious task, and the time spent in doing so passes slowly. Brushing should therefore be done by the clock to determine accurately how long three minutes' brushing really is. A convenient timing device is the small, three-minute glass that is usually used to time boiling eggs. It can be purchased for 10 cents at almost any 5 and 10 cent store.

Persons who have irregular teeth, many fillings, much bridgework or a systemic condition that might predispose them to decayed teeth or pyorrhea should spend more time in brushing. If pyorrhea already exists, brushing three times a day is advisable until a healthy condition is established; then brushing twice a day will usually maintain a healthy condition.

The brushing of the teeth should be given a definite place in the daily toilet routine so that force of habit will not allow it to be forgotten. The most desirable time for brushing is on arising and immediately before bedtime.

Brushing immediately after each meal has been advocated for many years, and the average busy individual has always pronounced this procedure as impractical. Fortunately these brushings are not necessary. Decay is not caused by food particles remaining in the mouth unless they are incorporated in the little acid factories, are of a fermentable nature and are kept in contact with the enamel of the tooth for a much longer time than the twelve hours between brushings.

If fibrous food becomes lodged between the teeth, it will be found that it can be removed much more effectively with dental floss than with a tooth-brush. Under normal conditions, however, fibrous food should not become lodged between the teeth. This condition should be called to the attention of the dentist so that he may remedy it.

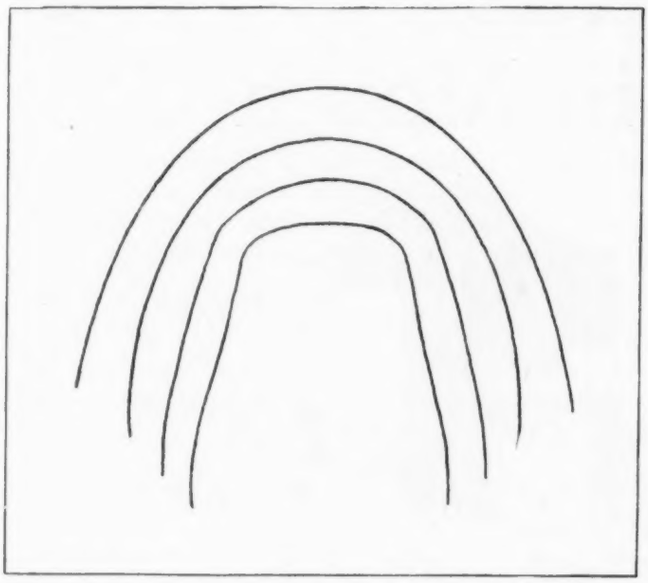
A person who brushes his teeth in an efficient manner for a sufficient length of time, twice a day without exception, is making use of the most practical method of dental disease prevention that the dental profession has at its command at the present time.

V. THE TOOTH-BRUSH

THE MOST effective weapon so far devised for cleaning the mouth and combating dental disease is the bristled tooth-brush. For civilized man it affords a means of bringing about the same cleansing action on the teeth and the same stimulating action on the gums that raw, coarse and detergent foods did for primitive man.

While the tooth-brush does not entirely eliminate decay, it will markedly cut down the incidence of decay. In preventing gum disease it is much more successful. If a tooth-brush is used correctly, it not only will prevent gum tissue disease but will aid materially in restoring health to the gum tissue that has become diseased.

The U. S. Patent Office at Washington has issued over 350 patents on American designed



Dental arches showing the impossibility of making a tooth-brush conform to even the outer contour.

tooth-brushes, and the number is still growing. Some of these brushes are as poor in design as they are in quality. In the past the public has been guided in the choice of a brush by expensive advertising and by the advice of a drug clerk who is usually instructed to force the sale of certain brushes, not because of their superiority but because of large profits.

Most tooth-brushes on the market are too large for efficient brushing. The use of a small brush with fairly stiff bristles is logical and advisable. The length of the working end should be about six rows of bristles, or about 1¼ inches, and the width should be two or three rows of bristles. The bristles should be of unequal lengths, and the groups of bristles should be far apart. The handle should be about 6½ inches long and sufficiently heavy to overcome too much flexibility when pressure is applied.

The elongated tuft found at the end of some brushes does not work as efficiently as is theoretically supposed and advertised. Its conformity to the dental arch on the outside becomes a distinct disadvantage when one wishes to brush the surfaces on the inside. The long bristles of the tuft also have a tendency to buckle or bend after they are wet. This prevents the penetration of these bristles between the teeth. In most mouths it is impossible to use this type of brush in the area of the second molars and wisdom teeth.

Strictly speaking, no tooth-brush can be made to conform itself to the dental arch both on the inside and on the outside. The smaller the brush, however, the closer is the adaptation to the arch, because only a small portion of the arch is covered at one time.

Substitutes for the bristled tooth-brush have recently been offered to the public. The working end of these substitutes usually consists either of a small cotton pad or of bristle-like rubber projections. Efficient cleaning of the teeth by means of these substitutes is impossible, chiefly because they cannot be made to clean between the teeth.

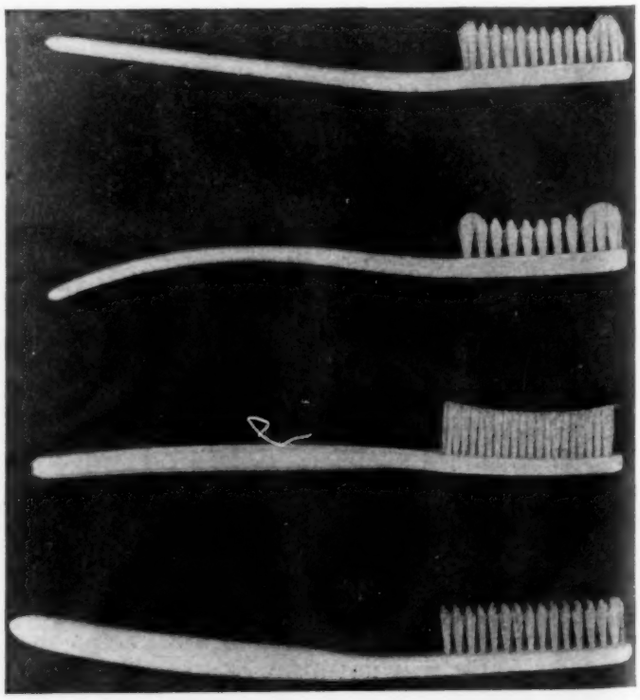
Every now and then dental floss as a tooth-brush substitute rides the waves of popularity. When properly used, dental floss effectively cleans between the teeth, but it has no stimulating action on gum tissue; therefore it can never be substituted for a tooth-brush, but it can be used in conjunction with it.

A thorough flossing of teeth requires time and skill. Incorrect use of dental floss is harmful to the gums. It must be passed gently between the teeth so that it will not snap down on the gum tissue and lacerate it. Usually a slight back and forth movement will help to ease it past the point of contact between the teeth. If bleeding results from the use of floss, either the gums are unhealthy or the floss is being used incorrectly. In either event the dentist should be consulted.

VI. THE CARE OF THE BRUSH

MANY new tooth-brushes of good quality are quickly ruined by improper care. Unfortunately, they are not then thrown away but are used for months in a worn-out condition. A few simple rules easily and painlessly introduced into the regimen of mouth hygiene will not only lengthen and maintain the efficiency of a brush but help to overcome some of the disadvantages of the bristled brush.

A new brush should be placed in a strong, cold, salt solution for at least two hours before



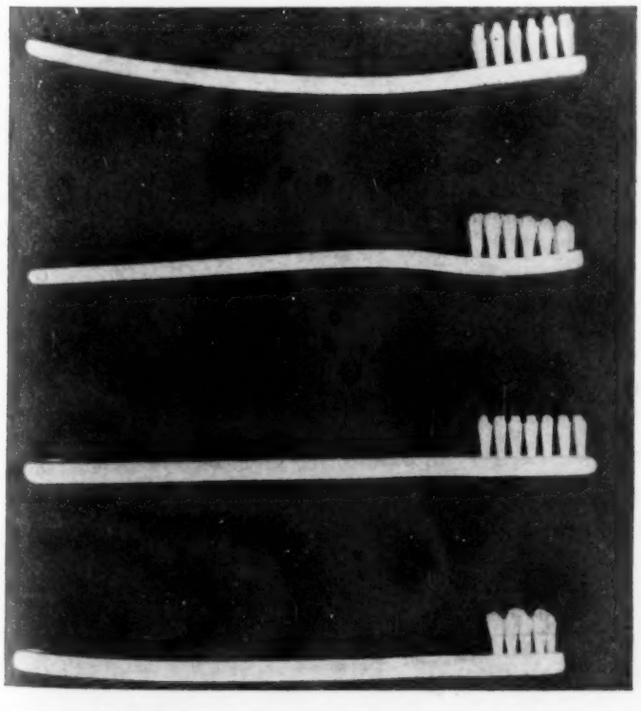
Tooth-brushes unsuited to proper brushing.

using. This procedure takes away the original harshness of the bristles and brings out their flexibility and pliability.

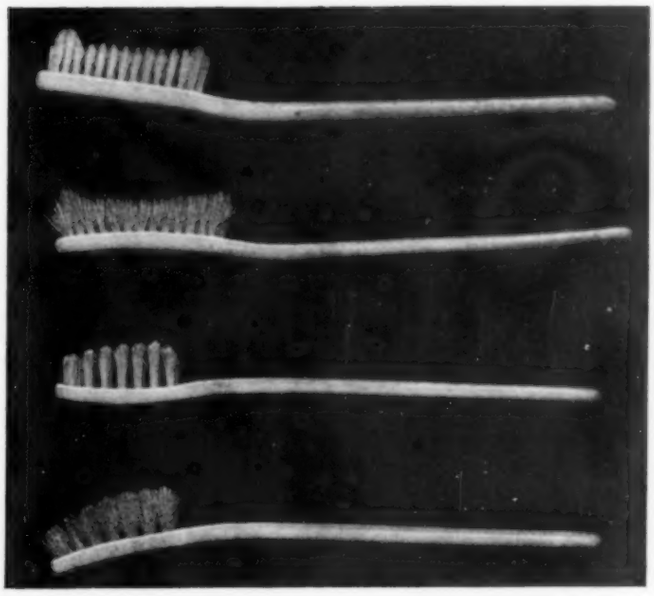
Many persons boil a new brush to clean and sterilize it before using it. This is an unfortunate practice because boiling destroys the flexibility of the bristles and deadens them. If the handle of the brush is celluloid or a material of similar composition, boiling hot water distorts it; if it is bone, the cement used to cover the wires holding the bristles disintegrates. Every tooth-brush of good quality is sterilized for at least twenty-four hours by formaldehyde fumes before it leaves the factory. In the manufacture of the brush, each process is so conceived that the flexibility of the bristles is not impaired. This work should not be undone by boiling the brush. A lifeless bristle means a worthless brush.

Cold water only should be used to moisten a brush before each daily using. Hot water temporarily destroys the flexibility of the bristles, impairing their efficiency at the time when it is most needed.

The brush should be rinsed thoroughly after brushing by holding it under a cold water faucet from which the water comes with considerable force. It seems to be a popular notion that holding a brush under the hot water will sterilize it after use. One must not forget that at least ten minutes is required for sterilization by boiling. To accomplish this sterility by means of hot water from a faucet would necessitate holding the brush under the faucet for an even longer period, because the water would be below the boiling point. The cleaning of a brush after using it is only a mechanical washing away,



Tooth-brushes well adapted to effective brushing.



Two tooth-brushes with composition handles are distorted and made useless by hot water.

which can be accomplished by cold water as well as by hot water without impairing the flexibility of the bristles.

As much water as possible should be shaken from the brush before it is put away. This is accomplished by sharply rapping the brush against the palm of the hand. If the brush is kept in a glass tumbler, the bristled end should be up.

A brush should not be kept in a tooth-brush container. Contrary to public opinion, the tooth-brush container not only destroys bristles and prevents drying but actually encourages bacterial growth. In many cases the tooth-brush container is never washed and is actually a source of infection for the brush.

For purely mechanical reasons, a brush should be allowed to dry for twenty-four hours after it is used. By this means the bristles will regain their original and necessary stiffness. Every person should be equipped with two brushes, one for morning brushing, the other for evening brushing. Supplementary brushes should be used if teeth are brushed after meals.

Allowing a brush to dry for twenty-four hours after using it serves another important purpose. Once used, a brush becomes infected. The bacteria found in every mouth are lodged in the bristles. All these bacteria cannot be removed by rinsing, and for this reason the brush has been pointed to with accusing fingers and has been called a menace. The bacteria that are normally or abnormally present in the mouth need for their growth and proliferation an environment that has moisture, darkness, food and a temperature above 97 F. When the brush is removed from the mouth, it contains organisms that in the main need this environment. If a brush is allowed to dry completely, those organisms needing moisture will die; the light,

the room temperature and the want of food will eliminate most of the remaining ones. By actual laboratory tests more than 99 per cent of the bacteria have been thus eliminated within twenty-four hours.

The bacteria and specks of dust that may alight on the brush from the air are as harmless as the ones we breathe. The mouth breather no doubt inhales into his mouth more bacteria and dust in five minutes than a brush collects in twenty-four hours.

A pair of brushes of good quality used once a day will do efficient work for about four months. A new brush should be procured every two months, and the older one of the pair should then be discarded. Using an old, worn-out tooth-brush is assuredly an example of short-sighted economy.

[NOTE.—In the November HYGEIA, Dr. Gardner will conclude "Common Sense in Mouth Care" with chapters on the A B C of proper brushing, the limitation of the tooth-brush, helpful hints, and prevention.]

HEALTHGRAMS ✣ from Articles in This Issue

¶Doctors estimate that one out of every four persons has sinuses which have been more or less affected by infection at one time or another; some specialists would put the proportion as high as 50 per cent. *See page 878*

¶Educators as well as intelligent mothers have proved that every child can possess a substantial number of correct habits by the immature age of 4 years, if he has been fortunate enough to have the proper guidance in that direction. *See page 912*

¶The phrase, "Oh, the child will grow out of them," is unfortunately too frequently heard, for the severe types of bowlegs and knock knees do not spontaneously straighten themselves. *See page 896*

¶The curriculum in health is more and more being interpreted in terms of a series of units of conduct through which the child lives. *See page 941*

¶Appetite is too easily influenced by habit to be a dependable guide to food requirements; it is easy to become accustomed to too much or too little. *See page 885*

¶The color of artificial teeth does not affect the cost of them, yet fakers advance fees as much as $100 for teeth a few shades lighter. *See page 891*

¶In 1920, 8 per cent of the total of 24,768 school children in Oslo, Norway, were infested with head lice; only a little more than 1 per cent of all school children were convicted of lousiness in 1930. *See page 915*

¶Contrary to public opinion, the tooth-brush container not only destroys bristles and prevents drying but actually encourages bacterial growth. *See page 919*

¶As variety is the spice of life, so variety in foods and food service is the lure that tempts frail appetites! *See page 908*

¶Cleanliness is a habit which receives universal, theoretical emphasis in schools, and the unfortunate pupil who disregards it too frequently is subjected to scathing condemnation. *See page 942*

¶The strain of practice may be judged by the fact that of 173 doctors whose obituaries were published in *The Journal of the American Medical Association* in one month, 100 died of diseases of the heart and of circulation. *See page 898*

¶A little girl said to her mother, "Why do you expect me to be so polite to you when you are so impolite to me?" *See page 901*

¶The fact that a health statement or article appears in a general newspaper or magazine in good standing, is unfortunately no guarantee of its reliability. *See page 939*

¶Of the more than 122 million people in this country, more than 10 million, or about 1 out of every 10, have measurable hearing defects. *See page 888*

¶"The number of children with normal vision, or emmetropia, is very small, being only 3.4 per cent." *See page 924*

¶Under correct storage conditions, a properly prepared and sealed baking powder should keep without deterioration for a year. *See page 928*

¶The Greek notion of leisure was not a time in which men did nothing, but rather a time in which they did what they really wanted to do. *See page 882*

Lest We Forget

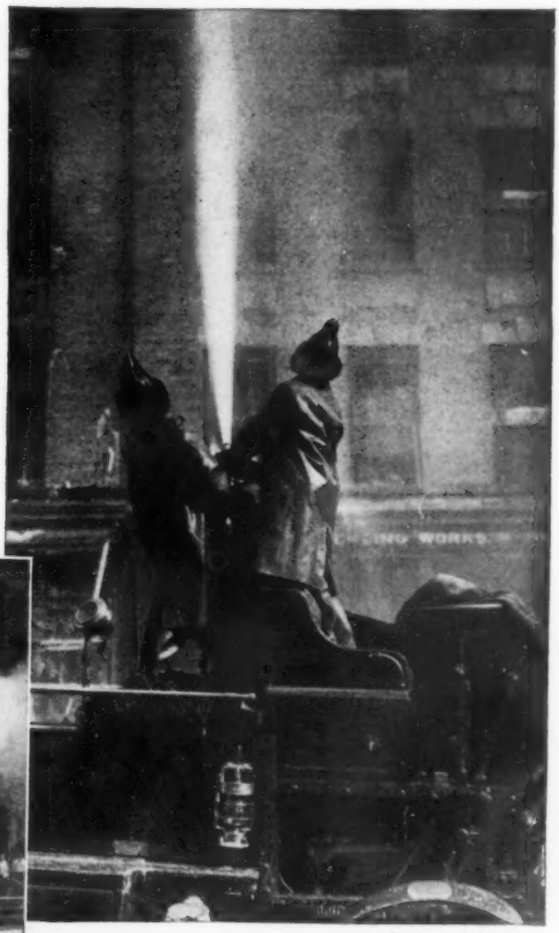
Fire Prevention Day—October 9

J. Jay Hirz

Girls employed in a Japanese department store learn how to make their own smoke masks.

J. Jay Hirz

Tokyo firemen with ladder and relief belt aid store as 800 shop girls and men practice fire drill.



Ewing Galloway

Ewing Galloway

The modern fire fighting apparatus above with its powerful stream of water operated by a truck is the result of twenty-five years of progress since the days of the old horse-drawn engine seen at the left.

The Eye Has Its Troubles:

OPTICAL DEFECTS

Chapter IV of

THE EYE BOOK

By *Hyman Cohen*

THERE IS an old and oft repeated statement that the eye, in many cases, is not a perfect organ of sight; nature is accused of being a poor craftsman. The statement is true; the accusation is undeliberated. But the accuser fails to understand that what he calls nature is the push of many conflicting necessities. The marvel is that, proceeding in as many directions and ways as it does, it has achieved such workable and inimitable adaptions to so many diverse ends. Nevertheless, it is true that the difference of 1/75 inch in the length or width of the eye, or a like difference in the radius of curvature in the cornea or in the crystalline lens, spells the difference between good and poor sight.

The perfect eye is one that is built optically right in every respect. It must also have the proper degree of sensitiveness to light. Such an eye has normal powers of vision, and it functions without effort and in comfort. It is found to exist in varying percentages among various peoples and under favorable modes of living.

Primitive and outdoor peoples are generally farsighted.

Any considerable deviation from the normal makes for much suffering and for strained, difficult sight that is below par. These departures from ideal perfection may be termed natural delinquencies in structure, and they result in natural delinquencies of function, such as the optical defects and the disturbances they bring about. Several different types of eyes result from variations in the direction of the departure from normal in the shape of the eye, or curvature of its refractive structures, the cornea and the lens.

In farsightedness, or hyperopia, the eyes are not perfectly round; they are shorter from front to back than they are from side to side, somewhat like a tangerine in shape. Because their bulge is less, such eyes see farther than the normal eye. But this advantage becomes a handicap for sight at close range, such as that needed for reading or sewing. When the farsightedness is not of an extreme degree, the adjustment for sight at close range is made by the accommodation. After the age of 45, it is usually necessary to have special glasses for work at close range.

Many Factors Decide Correction in Hyperopia

Whether farsighted eyes as such will give trouble and call for correction depends on the degree of farsightedness; the natural power of accommodation; the maintenance or loss of the accommodation, depending on the state of the general health and increasing age; sensitiveness to visual strain, and any complicating factors.

Primitive peoples, who usually follow outdoor occupations, are generally farsighted and find that state of great advantage. Under the conditions of modern civilization, with all young humanity bending over books and papers a good portion of the day, with many adults spending all day at books, figures, graphs, files and typewriters, with so many more working with instruments of precision at tasks requiring great accuracy, and with so many others such as seamstresses, tailors and draftsman doing their work at close range, farsighted eyes, uncorrected by proper glasses, are a great and actual source

of much physical discomfort, visual difficulty, mental irritation and a host of other symptoms manifested in the eyes and in other organs and parts of the body.

There is a special type of the flat, farsighted eye in which the flatness is so extreme that the power of accommodation is insufficient to compensate for it. Though they are built on the farsighted plan, such eyes have less than normal sight. The condition cannot always be fully remedied.

Few Babies Are Born with Myopia

Persons having nearsighted, or myopic, eyes have less than normal sight for distance. At close range they see well. Such eyes usually measure longer from front to back than they do from side to side. It is the accepted opinion that relatively few babies are born with nearsighted eyes; the percentage increases during the growth period. It may be said that it is perhaps an attempt on the part of the eyes to escape from the handicap to which the farsighted eye is subjected when it is increasingly called on by the demands of modern life and industry to attend to tasks at close range. The advantage that nearsighted persons have is offset, however, by their diminished, blurred distance sight. They move about in a constant fog; they have a strained, searching look. When nearsightedness is of high degree, there is a tendency for the eye to develop definite disease changes with further loss of vision. In young persons the condition may contribute to the habit of stooping with consequent disfiguring round shoulders.

Progressive shortsightedness is an especially serious form of myopia. The eyes become more and more nearsighted as time goes on, so that the glasses have to be changed approximately every six months. Ultimately a permanently diseased condition with great impairment of sight results.

The two types of eyes discussed, the farsighted and the nearsighted, occur when the eye as a whole has a simple optical defect of the one type or the other, one that affects the eye alike in all meridians making for the short eye or the long eye and for a greater or less degree of curvature.

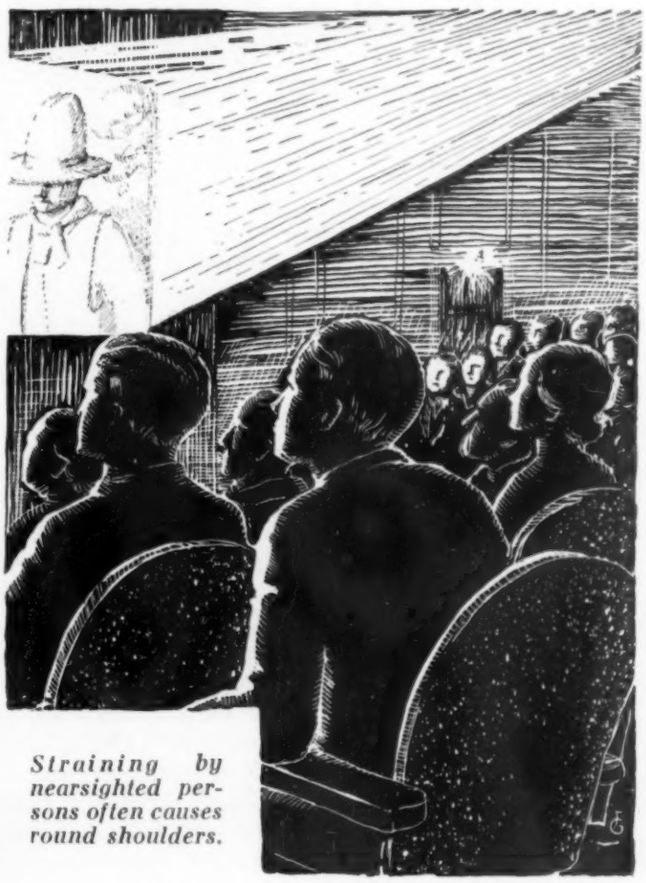
There are many eyes in which the trouble is not so simple. Astigmatism results when the deviation from the normal occurs only in one direction or diameter; for example, when the curvature is less or greater than normal, but only in one direction. There are various kinds of astigmatism, such as farsighted, nearsighted, mixed, simple and compound, according to the kind and direction of such partial deviation from the normal.

Because of an astigmatism all the light rays do not focus in one sharp point required for a distinct image. Some of the rays from the object looked at hit the "fixing" spot of the eye in the form of a point and others in the form of a brush. The image of an object then appears blurred and shadowy, and the acuity of vision is greatly impaired. The attempt to overcome this in order to see distinctly causes eyestrain, headache and a long train of other painful symptoms. Astigmatism is not a disease; it is a structural defect of the eye which can and should be corrected.

An extreme degree of any of the aforementioned types of eye trouble or kinds of astigmatism results in poor sight, or amblyopia, a condition that prevents the development of normal sight and that tends to become permanent unless it is remedied at an early age.

Presbyopia Is Change Incident to Age

Old sight, or presbyopia, is not primarily an optical defect. It is considered as a physiologic part of the changes incident to age. It usually comes on at about 45 years, sometimes sooner and sometimes later, and manifests itself in the difficulty that accompanies any task done at close range. At first the victim of presbyopia gets along by substituting a better light; but that soon does not suffice, and sight becomes blurred and difficult and the object being looked at must be held farther and farther from the eyes, until at times it seems that the arm is not long enough. Most persons first notice presbyopia while reading, while attempting to thread a needle or while consulting a telephone directory.



Straining by nearsighted persons often causes round shoulders.

Backwardness in school on the part of great numbers of the school population is due to defective eyesight.

Nearsighted persons do not experience this difficulty up to a certain point, and those wearing glasses remove them while reading or shove them up on the forehead.

Old sight is due to a loss of elasticity on the part of the crystalline lens, which is now in a less fluid state; the lens fails to bulge out or flatten down to the customary extent in response to the process of accommodation. This loss of elasticity really begins soon after birth, but it is easily counteracted by the accommodation until about the age of 45. From that time on, it becomes decidedly progressive and requires periodic correction by increasingly stronger glasses until the age of 55, when it remains stationary.

Distance vision is ordinarily not affected by middle age unless there is some disease of the eye. Occasionally, however, the eye physician observes a case in which the distance vision is greatly diminished. When the patient is asked to read the test chart, he is barely able to read the big letter at the top; his vision is one-tenth normal. Offhand, one might think that it is a case of nearsightedness. On further examination, however, it proves to be a case of a considerable degree of farsightedness.

Eyes May Indicate Decline in Health

What happens in such cases is that the power of accommodation has become prematurely weakened or, gradually or suddenly, has been entirely lost. This is an important observation, indicating a serious decline in the tone of the general health.

Any one's eyes, then, may be normal or possess one or another of the defects enumerated. As a matter of fact, only a small percentage of human eyes are perfectly normal. Most persons have eyes that are optically defective to a lesser or greater degree, in one or another of the ways described.

An important question in this connection is: Do the eyes match? Are they a pair? It is well known that, aside from any disease, many persons have one good eye and one poor eye. This is more frequently the case than is suspected, because the good eye masks the deficiency of the poor eye. Often it is discovered only by chance, as when for some reason the good eye is covered for a little while. Then it is found that the sight of the other eye is below par and not at all comfortably serviceable.

Small defects may pass unnoticed or be endured by those who are naturally less sensitive and by those who are not called on to use their eyes intently for many hours at a stretch. The severer grades should be promptly corrected to avoid further injury, the development of squint, and much distress.

Three Sets of Symptoms Show Eye Defects

All optical defects may produce untoward results corresponding to the kind and degree of the defect. In general terms the ill effects show themselves in three different but related sets of symptoms.

In the first place, sight for close range or for distance is decreased, blurred and difficult; the images are indistinct, sometimes distorted and bordered by shadows; occasionally there may be double vision.

Secondly, because of the constant attempts that the eye makes against these hindrances in order to overcome the difficulty and to gain better and clearer sight, discomfort and the overworking of certain muscles result.

Another serious affliction may befall the eye. Owing to the difficulty in seeing, which is due to an uncorrected error in refraction, the eye may become predisposed to strabismus, or cross eye. This condition often develops in children. It in turn further diminishes sight. The results are disheartening; the affected eye neither looks straight nor sees well.

The third classification of ill effects includes headaches and other reflex symptoms that are common, painful, energy-draining disturbances originating in the eye and manifesting themselves in other parts of the body. The foremost of these symptoms are headache, dizziness, nausea and even vomiting. There is often

drowsiness; the nerves are jangled, the person is irritable; there seems to be something in the way, an obstacle between him and his tasks.

The ill effects of errors in the optical apparatus of the eye, when they are allowed to go unremedied, reach beyond the personal considerations of good and comfortable sight and good and balanced health. They become unfavorable social factors of great significance. Since these errors exist among large masses of the population and affect all ages in all pursuits of life, they are evidenced in many ways.

Backwardness in school on the part of great numbers of the school population is due to defective eyesight. Children so afflicted are under a constant strain and are either dull and apathetic or excessively nervous. School tasks become burdensome; delinquency and possible antisocial tendencies develop. If the child is nearsighted or highly astigmatic, unhealthy habits of posture develop with a tendency toward certain types of curvature of the spine.

In the various occupational pursuits requiring constant use of the eyes there is a loss of snap and efficiency with the incidence of eye trouble. The victim is out of joint and works against a handicap; tasks dribble and crumble. Many such workers find their occupations uncongenial, in spite of all willingness. There is an attitude of hanging back in life, a lack of good fellowship. The race of life, turned into an irritating drudgery, is frequently lost. Poor eyesight is one of the occupational drains that lays a heavy tax on the national economy.

In certain cases, and these are by no means few when they are considered on a national scale, serious unremedied imperfections of the eyes, especially a high degree of nearsightedness, ultimately lead to grave diseases of the eyes, unfortunate complications and total loss of sight. Slowly, unwittingly, through neglect and at great cost, blindness is manufactured, and the dwellers in dark desolation are increased.

Neglect of Prevention Exacts Heavy Toll

It is not my purpose to overstate or exaggerate the extent to which preventable eye troubles exist. Every physician specializing in the branch of medicine dealing with the eye can testify to the heavy toll exacted in poor sight, in discomfort and disease, and in occupational and social loss because prevention was neglected. In his office and in his work in eye clinics, he meets daily the conditions described and others far worse. Every school teacher and public health officer knows the detriment children suffer on account of poor eyesight. Many employers of labor and heads of industrial welfare departments are awake to the social and economic importance of good, comfortable eye function.

The keynote to the entire discussion of this phase of the eye's share and fate in human existence, that of its optical defects and their harmful consequences, is the urgency for the early diagnosis and correction of such defects. If nature does not always toe the mark to $\frac{1}{75}$ inch of the point of exactitude, it has, nevertheless, furnished the means, the knowledge and the skill to remedy almost all instances of refractive error and obviate the suffering and many sided losses these errors bring about if they are not corrected.

One will find it out sooner or later if something is wrong with one's eyes. The point is to find it out sooner rather than later, in time to avoid great discomfort and damage to the eyes.

The only way to ascertain the nature of the difficulty and its proper remedy is to have an expert examination by an oculist or an ophthalmologist, a physician practiced and skilled in the treatment of the eyes. Only such a specialist is truly competent to take care of the eyes, no matter what the trouble.

Eyes Should Be Examined at Stated Periods

It is indeed desirable, and it would prove of immense benefit to the people as a whole, to have every one's eyes examined at certain stated periods of life, aside from any special need for examination at other times. Consistently applied, such a system would prove the greatest single measure for sight conservation.

The first period that I would propose for routine examination is at the age of 4 years. This is the age of first full consciousness, when the child's eyes dart about from object to object. The visual impressions received at this time often prove lasting. It is important for the general health that the eyes are not under any strain or handicap when they are so busily occupied, and it is important for the mind and for the future of the child that the impressions gained are correct.

It is rare for a child not to have had some illness up to the age of 4. Such illnesses afford the physician an opportunity to determine the condition of the heart and lungs and the other vital organs and functions. However, unless the eyes are directly attacked by disease, they are not examined; the condition of the eyes of the little ones goes unknown. Children may grope in a fog of poor sight, and strain unaided against some handicap, and yet parents placidly look on, pay no heed and take no measures to come to their assistance in time to save what cannot be bought later at any price. Even such manifest conditions as cross eye are frequently overlooked or negligently given no heed, even by intelligent parents. It is a sad thing so to neglect children's eyes.

In some of the larger communities children's eyes are examined by school and health authorities, but only a relatively small number of children of the total school population are so reached, and in many instances the examinations made are inade- *(Continued on page 954)*

A Housewife Looks at the Committee on Foods

By Doris W. McCray

XIII. *Committee Acceptance of Baking Powders*

I DISTINCTLY remember when I learned to make soda biscuits at my grandmother's house that grandfather would often complain that they smelled of "sody" as he called it. At other times they would be somewhat sour and soggy. My grandmother was doing her best to teach me her own culinary skill when I was scarcely big enough to reach the top of the table, but she lived in the days when culinary skill was a precarious achievement. She mixed wheat-meal, corn-meal and salt with hot milk and set it in a warm place for "salt-rising" bread which sometimes developed a most peculiar odor. Salt-rising bread today is made with a culture of Bacillus welchii, prepared commercially in a manner similar to yeast.

Grandmother fixed home-made yeast, but grandfather wisely advised her to confine her baking activities to biscuits. I distinctly remember that in those days she considered baking powder too high priced for everyday use; later she used it regularly.

The history of leavening agents is the story of a struggle to convert the primitive sun-baked slabs of grain and water into porous, light bread. A leavening agent produces the light, cellular structure that renders oven products attractive and palatable, and makes their nutritive values readily available for digestion.

An unleavened bread prepared from acorns and beechnuts crushed between stones and soaked in water was described by Virgil; Pliny told of similar methods using wheat. Herodotus wrote of the Egyptians who for centuries prepared a leavened bread of coarsely cracked grain, samples of which have been dug out of early Egyptian ruins. It was the custom to save a piece of dough and allow it to sour. This sour dough, or "leaven" as it was called in biblical writings, fermented and leavened the fresh dough. This primitive, uncertain method of leavening was still in general use in the days of the Pilgrim fathers. Brewers' yeast was first used by bakeries in the nineteenth century.

About eighty years ago in England, there was introduced a method of making aerated bread. Flour was mixed with water that was charged with carbon dioxide; the mixing was done under pressure. The dough was released into pans, then put into a hot oven where the expansion of the carbon dioxide gas produced the leavened loaf.

Early cook-books called for large numbers of eggs in cakes, and air was incorporated into the dough by long continued beating. Air is still beaten into egg whites that are then folded into batter, although this method is not necessary when a good baking powder is used. Angel cakes and sponge cakes depend on air for leavening, although the cell walls of the egg whites are made more firm by the addition of acid in the form of lemon juice or cream of tartar. Sponge cake recipes which call for a smaller number of eggs together with some baking powder have become more popular. One teaspoonful of baking powder may be added advantageously to the ordinary angel cake recipe.

Steam is the leavening agent which raises popovers. Their making is considered the acme of culinary skill. If the batter is not correctly mixed, the pans preheated, the oven extremely hot and the baking time sufficient, they are liable to fall into a doughy, soggy mass.

Records of the late eighteenth century show that "pearlash" was used in molasses cakes and ginger cakes. Following its use came "saleratus," a crude form of the present, highly refined sodium bicarbonate, commonly called baking soda.

Soda was used with molasses, vinegar or sour milk. The chemical reaction of acid and alkali in the batter or dough produces carbon dioxide gas, the same gas that causes the effervescence in carbonated beverages. The released gas gives the dough a spongelike structure. The delicate cell walls of dough become firm as the temperature rises during baking. The finished,

light, porous, baked product is palatable and easily digested. Potassium bitartrate, which could be used with soda, was put on the market in 1850 under the name of "cream of tartar," by which it is commonly known.

In 1855 the first reference to baking powder was made in scientific literature; the author investigated a baking powder put on the market two years previously that contained cream of tartar, soda and starch. The so-called cream of tartar baking powder has been improved and refined since this first product.

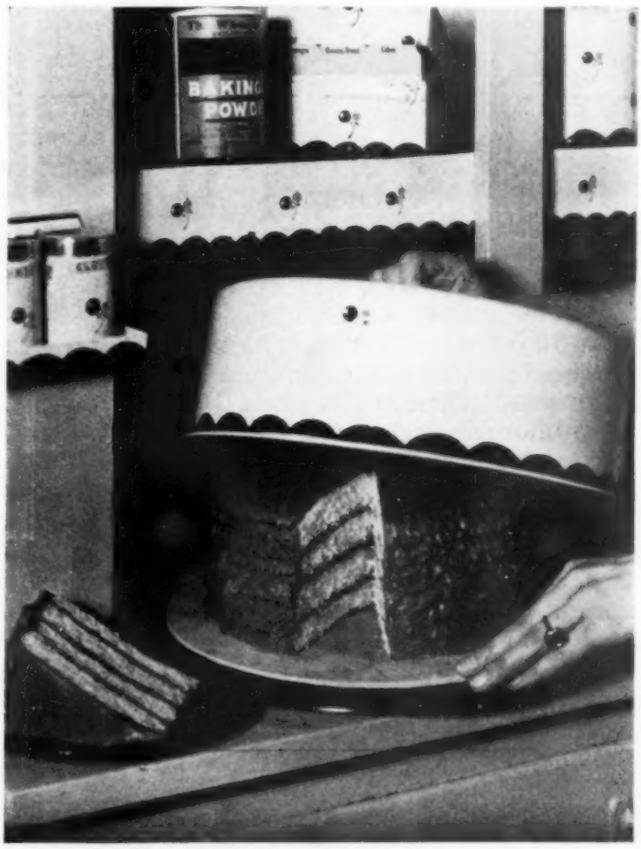
In 1856 a patent was granted for an acid which was put up in powder form in a paper package, wrapped together with a package of baking soda, under the name of "bread preparation." A wooden measuring device accompanied the two packages, the cavity on one side of the block being double the capacity of the cavity on the other, and the housewife was directed to fill the larger cavity with the acid phosphate and the smaller one with the baking soda. The next step was the use of a can with two sections fitting into each other. Later the two ingredients were mixed together and marketed in glass bottles under the name of "yeast powder," and in 1893 the improved preparation was marketed in tin cans as a baking powder. Some years later, lime or limestone was substituted for the bone ash in phosphate baking powder, and it was finally brought to its present state of chemical purity and definite leavening strength. Calcium acid phosphate is the sole acid of a "straight phosphate" baking powder.

In the effort to make a baking powder at less cost, experiments have been made with a number of acids. The lactic acid of milk, and malic acid as found in cranberries have been tried, but many of such experiments have not proved successful in producing baking powder which would keep its strength.

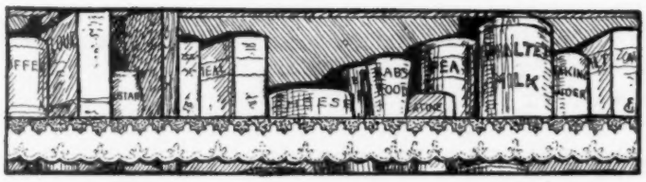
The first official notice of alum baking powder appeared in 1878. The alum referred to here was undoubtedly either burnt potash or ammonia alum. However, about 1892 the manufacture of anhydrous sodium aluminum sulphate, now frequently referred to as S.A.S. became established and replaced the other materials. This latter has at times been incorrectly referred to as "alum." Baking powders containing sodium aluminum sulphate as the sole acid ingredient have largely disappeared from the market, because this acid is rather slow in reacting with the soda and there is the possibility that the batter, when placed in a hot oven, will crust over before the leavening has liberated all of the carbon dioxide gas. When this happens, the top crust breaks as the batter continues to rise. For this reason, the "double acting" baking powders are now common; they combine an acid which dissolves quickly with one of slow solubility, in order to have leavening action in the cold dough, followed by further leavening action in the hot oven. The acids used in such "combination type" baking powders are sodium aluminum sulphate and calcium acid phosphate in various proportions. One essential difference between the various baking powders in household use is in the amount of leavening action which occurs before the dough is put into the oven. A successful baking powder gives satisfactory results when used in the home according to directions.

A tartrate baking powder, or so-called "cream of tartar" baking powder, will liberate all of the carbon dioxide at room temperature. However, owing to the high viscosity of the batch of dough, the gas will be largely retained for a considerable period. When dough must be held before baking, it should be refrigerated at a temperature below 45 F. When batter must be mixed and held at room temperature before baking, the baking powder should be added to the batter immediately before baking and should be well mixed with the batter.

A straight phosphate powder will yield two thirds of its gas at room temperature, but heat is required to liberate the remainder. A double action powder will liberate from one third to one half of the gas at room temperature and the remaining gas after heat is applied. Opinions of the various baking powder companies differ as to the exact proportion of leavening



Dependable baking powder is necessary for making light, easily digested cake.



action which should take place in the cold dough and in the oven.

All baking powders contain baking soda as the alkali but differ in the kind of acid used. They are classified according to the kind of acid, as tartrate, phosphate, sodium aluminum sulphate, and as a combination of acid phosphate and sodium aluminum sulphate baking powders. All four types of baking powders are eligible to acceptance by the Committee on Foods of the American Medical Association, provided they meet all of the requirements.

Since there is a chance of a wide variation in the amount of leavening action from the various baking powders sold at various prices, the U. S. Department of Agriculture has defined the composition of commercial baking powders as follows:

> Baking powder is the leavening agent produced by the mixing of an acid-reacting material and sodium bicarbonate, with or without starch or flour.
>
> It yields not less than 12 per cent of available carbon dioxide.
>
> The acid-reacting materials in baking powder are: (1) tartaric acid or its acid salts, (2) acid salts of phosphoric acid, (3) compounds of aluminum, or (4) any combination in substantial proportions of the foregoing.

The definition and standard arrived at in conference with the baking powder industry fixes the available carbon dioxide at not less than 12 per cent, which means the amount released under home baking conditions. This definition is used as a guide by Federal officials in the enforcement of the Food and Drugs Act. Available carbon dioxide is accurately determined by methods outlined in the Official and tentative Methods of Analysis.

At the time this standard was set, recipes varied considerably, and cookery results lacked uniformity when the various baking powders were interchanged. After the standard was set, it was found that many recipes could be changed to call for a smaller amount of baking powder. The standard amount required today is 1 level teaspoonful of baking powder for each cupful of sifted white flour. This may be varied slightly in cakes and when various types of flours are used.

All baking powders have approximately the leavening strength required by law, plus a small amount, approximately 1 per cent, to allow for possible deterioration before consumption. The fact that according to law all baking powders must have the same amount of leavening strength is an indication that all have sufficient available leavening strength for use with ordinary recipes.

Baking powder is used solely for the purpose of leavening the batter or dough. An insufficient amount of baking powder fails to leaven the mixture sufficiently and to produce a light, delicious, easily digestible baked product. Too little baking powder may cause or contribute to lack of volume, heaviness, soggy streaks, dense tough crust, leathery crumb, rubbery feeling, or too moist crumb.

An excess of baking powder is not economical; it may produce poor texture, and, when used greatly in excess of requirements, the cell walls of the batter may be actually broken down so that the product is not light. Aside from other influences, such as oven temperature, too much baking powder may cause, or be a contributory cause of falling in the oven, lack of volume, coarse grain, excessive shrinkage, soggy streaks, uneven grain, poor texture, unsightly cracks in the crust, or a baked product which is too tender to be handled, too short and crumby and too rapidly dried out. An excess amount of baking powder may also produce a bitter flavor in the baked product, or if the manufacture of baking powder is not properly controlled, it may produce a bitter taste. However, high grade baking powder is proportioned so that the acid and alkali react completely on each other, and there is no excess of acid or soda in the baked product.

In the advertising of one of the accepted brands of phosphate baking powder, it is claimed that the product has nutritional value for supplementing the diet with calcium and phosphorus. These minerals are useful for building teeth and bones of the body. Personally, I had seriously wondered, when I read the advertisements of this brand of baking powder, whether or not the calcium and phosphorus salts formed during baking would be in an available form permitting absorption into the blood stream to nourish the human body. When I saw that the advertising claims for nutritional value had been accepted by the Committee on Foods of the American Medical Association, I had confidence in the claims and nutritional values. Reliable manufacturers do not usually advertise falsely, except as they are ill advised by incompetent and unscrupulous persons. Advertising checked by authorities having the competence of the members of the Committee on Foods and subject to its control, carries a great deal more weight as to dependability and truthfulness. That dicalcium phosphate and tricalcium phosphate are assimilable by the animal organism is not now doubted by any one familiar with literature on this subject. Sherman, McCollum, Forbes and others are quoted as authorities.

I was also much interested in the fact that baking powders of the combination phosphate and S. A. S., or sodium aluminum sulphate, type had been accepted, which gives assurance

of the wholesomeness for regular household use of this kind of baking powder which has been used at the rate of several million pounds each year in the homes of the United States. The question as to the possible harm in the use of this type of baking powder was referred to a referee board of consulting scientific experts, also known as the Remsen Referee Board which was appointed by Theodore Roosevelt when he was President. Excessive amounts of baking powder were fed to healthy persons over a period of time to observe effects. The conclusions of this board were published as Bulletin 103 of the U. S. Department of Agriculture and summarized as follows:

Aluminum compounds when used in the form of baking powders in foods have not been found to affect injuriously the nutritive value of such foods. When aluminum compounds are mixed or packed with a food, the quality and strength of said food has not been found to be thereby reduced, lowered or injuriously affected.

Manufacturers of baking powders are not prohibited from using other harmless substances in addition to those included in the U. S. Department of Agriculture definition, but if any such are used, this fact must be plainly stated on the label so that the purchaser will be fully informed. But while other ingredients might be used and declared on the label, the average household purchaser of baking powder would lack the knowledge of chemistry and nutrition necessary to decide whether or not the amounts of such ingredients would be useful or harmful. The Seal of Acceptance of the Committee on Foods is a safe guide.

Starch in baking powder has three definite purposes and, although it is inert material, it should not be considered an adulterant. It separates the particles of the "acid" ingredients from the baking soda, thereby preventing, or at least greatly retarding, their chemical action. In other words, starch prevents a too intimate contact of these ingredients and insures against a loss of strength in the baking powder before use. It prevents the absorption of moisture from the air by the acid ingredients and the baking soda, which otherwise would cause a slow reaction resulting in the loss of carbon dioxide. It gives greater bulk to the product, enabling the user to obtain a more thorough mixture of the baking powder with the flour and other dry ingredients. Highly refined, thoroughly dried corn-starch is ordinarily used in the manufacture of baking powder.

To be accepted by the Committee on Foods, a baking powder must be free of harmful metallic impurities. The baking powder must be absolutely clean and sanitary. It must reach the consumer in good condition; baking powder deteriorates rapidly when exposed to high humidity, and atmospheric conditions must be controlled during the final stages of manufacture.

Baking powder cannot be blamed for all baking failures. Correct time and temperature are essential, as well as other factors.

Under correct storage conditions, a properly prepared and sealed baking powder should keep without deterioration for a year. It should not be stored near water pipes, damp walls or a stove. Baking powder is susceptible to strong odors which are readily absorbed, therefore it should not be stored near soap, kerosene or other products that give off strong odors. The can of baking powder should always be tightly closed. Baking powder should never be measured with a wet spoon. A new can of baking powder should be opened carefully in order that the lid will not be bent so out of shape that it will not fit tightly when replaced. One brand of baking powder accepted by the Committee on Foods has a lid that is easily pried up with the handle of a spoon and just as easily replaced. Inside the lid is a parchment paper cover that protects the baking powder from moisture until the can is opened; the housewife may cut away only two thirds of the paper leaving the other third in the can to level off the spoonful of baking powder being taken from the can.

Since all modern, tested recipes call for level measurements, it is important to measure level spoonfuls of baking powder. One may dip the teaspoon into the baking powder, lift out a rounded spoonful and then level it off with one stroke of a case knife.

Baking powder which has deteriorated to a marked degree, because it has been allowed to absorb a considerable *(Continued on page 952)*

AMBROSE O'PSHAW, *Detective*

In the First Instalment

THOSE who know say that Ambrose O'Pshaw was not always a great detective. At first he was known in the village as The Thinker, but after awhile the people began to smile as they walked past his home, for so much of his thinking had turned into sleeping that he and his home fell into a state of disrepair. Then one day he discovered that he had only one penny left between himself and starvation, and so, in spite of an aching head, he sat down to think very hard. He decided that he would go into business and he hung out a sign which read:

AMBROSE O'PSHAW, DETECTIVE, I SOLVE TROUBLES.

But when the villagers saw the sign, they laughed at him, and one neighbor who had many troubles said, "I'm sure you could not help me solve them, since you have not solved your own." Ambrose did not understand.

Then Mrs. Merrywell heard of his sign and came all the way from Mayflower Road to consult him about her son who liked to lie in the pig pen all day doing nothing but sleeping. However, when she saw Ambrose, she turned away in dismay, and Ambrose was puzzled again.

Almost ill with worry, Ambrose buried his face in his hands and stumbled toward his house, and then he tripped and fell into the rain barrel. When he scrambled out, he discovered that the water, which had been so clear and clean, was muddy and that muddy water ran from his hand.

"Why, why, I'm d-dirty!" he stammered. "Just as dirty as a—as dirty as a pig!" His eyes became big and staring. "A pig! Just like Mrs. Merrywell's son! Now I know!"

"Why, Mrs. Merrywell, don't you know me?"

Chapter II

By NELLIE G. HERRIMAN

TWO DAYS later Ambrose stood on his porch, brushing his best cap. It was early in the morning, and a robin was pulling its wriggling breakfast out of the grass.

"Good luck to you, Mr. Robin!" Ambrose said, feeling happier than he had felt for a year. "As for me, I shall soon have my breakfast also; but I should not care to share your worm, thank you! We human beings do much better when we take a big glass of milk with toast, as I have recently discovered."

He took his cap into the bedroom and hung it on a hook. The room was so spotless and orderly that he stood and gazed at it for a moment before he hastened to the kitchen to prepare his morning meal. "Oh-lee-oh-lay-lee-oh!" he sang, brushing an imaginary crumb from the table's white cloth. In a box there was a loaf of bread, carefully wrapped in clean paper, and a bottle of milk was waiting for him on the table. He broke into a loud whistle as he washed his hands and dried them on a crisp towel near the sink.

"It's a good thing I learned what my trouble was," he said aloud, slicing his bread for toast. "Otherwise, I should never have cleaned this house, which I found in a frightful state. Moreover, I should not have found the three coins which I had hidden in the soap box for safe keeping and so should have been forced to share Mr. Robin's breakfast. Moreover, I should probably have been too tired to move and should have been groaning in bed this very instant. I wonder where my headache went? Oh-lee-oh-lay-lee-oh!"

There was a rattle of wheels, and the little detective ran to the door. "Good morning, Mr. Grabpenny!" he called cheerfully. "Did you ever see a finer morning?"

Mr. Grabpenny was looking even more astonished than he was when he saw Ambrose O'Pshaw's sign. He could not believe that this neatly-clipped yard belonged to Mr. O'Pshaw, nor that it was on that freshly washed porch that Ambrose used to sit and sleep. And when the scrubbed, polished, brushed and pressed

little man called to him, he could hardly believe that it was Ambrose. But of course it was, for who else had so long a chin, so short a nose, such big brown eyes and so little brown hair? Mr. Grabpenny whipped up his horse without taking time to return the little detective's greeting. He would have real news for the villagers this morning!

An hour later Ambrose came out of the house and closed the door behind him. He was dressed in his best, and his face was rosy from plenty of soap and water. Stepping quickly, he went across the bridge and down the road. A stranger, seeing him for the first time, could not have helped guessing that this was a detective going out to solve a case.

By making frequent inquiries he finally found the home of the Widow Merrywell. That good lady answered his rap herself, and he saw signs of tears on her face. Being a detective, he knew at once that her troubles had not yet been solved.

"I don't wish to buy anything, thank you," she said, starting to close the door.

"Why, Mrs. Merrywell, don't you know me?"

She peered closely at him. "Why, I have seen you somewhere; but it must have been long ago, for I cannot remember who you are," she said.

"I am Ambrose O'Pshaw, the detective," he said.

"Well, well, I declare! So you are! But you have changed completely! Are you in disguise?"

"No, this is the way I should look. I was not myself the other day, but I found the troubles you mentioned and have solved them. I hope that I shall never be so careless again. I came to see whether you would let me take your son's case. I shall gladly do it without a fee, since you helped me solve my troubles."

"I declare, I do believe that you will be able to help him!" she smiled. "I feel happier than I have felt for a long time."

"And so do I!" said Ambrose. "Oh-lee-oh-lay-lee-oh!"

"My son, Henry, is asleep in the orchard," she said. "Come and see him."

Several black pigs were grunting and rooting beneath the apple trees, and Ambrose saw a boy lying there, fast asleep, with a tuft of grass for a pillow. He was a great, hulking lad, dressed in soiled brown clothing. An old straw hat was pulled over his face, and one shoe was off, displaying a large hole in the toe of his stocking. His coat was tattered and torn. A young pig came up as they watched; he thrust his nose under the sleeper's chin, but the lazy fellow only turned on his side and snored loudly.

"There he is!" sobbed the widow. "That is my son! What can you do for such a lad?"

Ambrose gazed in horror at the boy. "You must let me think for a while," he stammered. "The case is even worse than I had expected."

Mrs. Merrywell went into the shade of the tree and shook her son. "Wake up, Henry!" she cried. "There is a man to see you."

"Humph!" said Henry.

She pulled the hat from his face and shook him again. He opened one eye to look at her; then he put up his dark hand to shield his face.

"Ugh!" he grunted.

"You must get up and mind your manners," she insisted. "We have a guest who has come to help you."

"Don't want help!"

"Will you please get up?" she coaxed.

"Nope!"

"It is soon time for luncheon!"

"Fetch it!" Henry closed the eye and sighed comfortably.

Ambrose was watching with consternation. How could he cure a person like that? He remembered that he had been almost as bad three days ago and turned red with shame. He was determined to help the widow, for had she not helped him?

"Has your son always been so?" he asked, as he and the widow went away from the orchard.

"Indeed not! At one time he was the gayest, brightest child I ever saw. At that time we were terribly poor, but he made my life happy by always having a song or a joke. And what a fine worker he was! He and I together worked hard to save enough money to buy this little farm. Now that we have it and could be so happy, he has become a loafer, as you have seen. At times I think I cannot bear my trouble!" She hid her face in her apron and wept.

"Don't worry, Mrs. Merrywell," Ambrose said soothingly. "I'm going to think my hardest; and by the way, was your boy a great thinker?"

"Well," she said thoughtfully, "he was a thinker, but he was a doer as well. He thought about things quickly; then ran and did them quickly."

"Then his case is different from mine," said Ambrose. "I thought about many things but never did them. That is the reason I came to be in such a state."

Mrs. Merrywell left him and went into the kitchen to prepare the luncheon. Mr. O'Pshaw sat on the porch and thought about the great, slovenly lad under the tree and wondered how his case could be treated. He felt that he must solve it successfully, for the widow was depending on him, and besides it was his first case.

His thoughts were interrupted by a sudden noise. It was loud and rumbling and came rolling in from the west. The widow had heard it, too, and she came running with a frying pan in her hand.

"Is that thunder?" she cried.

"It seems to be," he agreed. "Look at that big cloud, rolling and tumbling in the wind. We are going to have a storm."

A young pig came up and thrust his nose under the sleeper's chin.

"Oh, we must bring my boy into the house!" she cried. "He must not be out in the storm." She ran into the orchard and shook the sleeper. "Wake up, Henry, wake up!"

Ambrose followed, but he stopped just before reaching the side of the boy.

"Mrs. Merrywell," he said.

"Yes?"

"Do you really want me to help you?"

"Oh, yes, yes!" She tugged at the boy. "Both of us together can carry him easily."

"I didn't mean that. I meant, do you want me to solve your trouble?"

"Of course, I do!"

"Then promise to obey my orders." The little detective was speaking earnestly.

"I promise."

"Then," said Ambrose, "don't awaken Henry."

"What!" She stared at him.

"Leave him out here. I have found that a little water will not hurt one. He will not drown or be injured, I assure you."

"Oh, I could never leave my boy out in a storm!"

"You promised," said Ambrose quietly; and the widow nodded her head and, wiping her eyes, walked into the house. Ambrose followed and helped her close the windows against the storm; then he softly went about and turned the keys in the doors. He had no sooner finished than a burst of wind and a dash of water against the windows announced that the storm had arrived.

Almost immediately he heard steps running across the porch, and fists pounded the door.

"Maw! Maw! Let me in!" A voice bawled.

"Be very quiet, Mrs. Merrywell!" Ambrose said softly.

"Let me in! Let me in!" howled the voice. "I'm d-drowning! Please let me in!"

"Oh, what shall I do?" moaned his mother.

"I should advise you to gather up fresh clothing and several large towels to put through the door. I'm sure your son will need them when the storm has ended," the detective said wisely.

A large shivering lad was huddled against the door when the rain finally stopped and the sun peeped out to see what had caused all the excitement. The boy's clothing was soaked, his shoes were full of water, and little streams ran from his chin and nose.

The door opened a narrow crack, and a hand thrust a bundle of towels and clothing toward him.

"P-please, may I come in?" quavered the boy.

"Not until you are clean and respectable!" snapped a man's voice, and Henry jumped with surprise.

After several minutes there was a tapping at the door, and a voice said meekly, "I'm clean and respectable now. May I please come in?"

The door opened, and Henry rushed into the warm room. The air was full of the good odor of cooking food, and it was so pleasant that he forgot to be angry at the strange man who sat looking at him.

The Widow Merrywell hurried about, setting the meal on the table. Her face was wreathed in smiles, for it was good to see how handsome her boy was, now that he was clean and wide awake. She made the table as attractive as it could be, for she had heard that foods digest so much better if they are served nicely. While she put the finishing touches on the luncheon, she showed Ambrose where he might wash his hands and face. Even Henry peeped into a mirror to see whether his hair was neatly parted!

As they ate, Ambrose decided that the widow was the best cook in the world. He had never eaten a finer or more bountiful meal. The widow gave him a mountain of fluffy mashed potatoes with plenty of gravy. Then she served ham, pineapple and sweet yams, all fried in the same skillet, so that each made the others taste even better than usual. Large cups of steaming

coffee became pale yellow when the sweet clotted cream was added, and Henry added a great deal of sugar to his cup besides. For dessert there was a large wedge of apple pie with a triangle of cheese and, as a final surprise, a rich pudding with butter sauce. Ambrose was glad that he had been hungry so long, for he could not possibly have eaten so much otherwise. After the first servings were gone, the widow apologized for her simple little luncheon and urged him to have a second helping of everything. Henry accepted her offer and ate in great rushing bites, resting both elbows on the table. Mr. O'Pshaw knew that these were poor manners, but he almost wished that he might follow the boy's example. As he ate, he began to feel tired and sleepy. Detectives surely work hard, he thought, since one morning's labors had made him so weary.

Henry went out on the porch after the meal, while Ambrose remained in the house to bid the widow farewell and to thank her for the excellent luncheon.

"You were most welcome," she answered, "and I can never thank you enough for curing my son's troubles. Please come and take luncheon with us again tomorrow. I'll have the finest meal I can prepare, and you will have a good chance to become acquainted with my son. Now that he is his old self again, you will find him interesting. He will be over his shyness by tomorrow."

Ambrose gladly accepted the invitation and took his leave. As he crossed the porch, he noticed that Henry was dozing in a chair; and a little shadow of doubt crossed his mind. How terrible if the boy had not been cured, after all!

How long the road home seemed! Weary mile after weary mile he went, dragging his aching feet through the dust. He blamed the warm sun for his sleepiness and wondered whether it was also responsible for his headache. Oh-hum! He wished he were home. He had chosen a hard profession for his life's work, but it was nice to know he had helped a poor boy already. Oh-hum! That shade beside the stream looked inviting! He believed he had earned a little nap.

When he awoke from the nap, he stood up and brushed his wrinkled coat. He felt somewhat refreshed, and the remainder of the journey was not so difficult. When he arrived home, he went into the neat little house and flushed with pride at the thought that this was his own home. Then he happened to glance into the mirror and saw a swollen eyed, disheveled fellow, who looked sadly out of place in the pleasant room.

"I shall soon attend to that!" he said grimly and went to the well in the dooryard. Laying aside his coat and rolling up his sleeves, he splashed in cold water until he was puffing. Feeling somewhat better, he went about his evening chores. There was a little food in the cupboard, but he didn't feel particularly hungry.

"A cup of tea will be enough, as I ate so much for luncheon," he said. Then his eyes fell on the spotlessness of the little kitchen. "Tea belongs to the man I used to be," he said. "I'm trying to be a new person, to fit into this new little home. No more tea for me!" He filled a glass with milk and carried it to the porch, where he could enjoy the soft summer air as he slowly sipped it.

Ambrose awoke early the next morning, with a feeling that the day would bring great events. He hopped from bed and skipped about from joy of living. Chuckling, he devised a sort of shower-bath above his bathtub with a short piece of garden hose and had a bath that made him glow rosily. He felt so fine that he smiled at himself as he stood brushing his hair before the mirror. Instantly the smile left his face. There! He had discovered another thing that had long been neglected! He rumaged in the cupboard until he found a tooth-brush, and his teeth were sparkling when he smiled at himself in the mirror a few minutes later.

"Not bad!" he said proudly. "Not at all bad!"

He was a fine looking fellow as he tapped at the Widow Merrywell's door just before noon. The sky was so bright, the birds sang so cheerfully, and the walk had been so pleasant that he was quite unprepared for the tear stained face that greeted him when the widow opened the door.

"Oh, Mr. O'Pshaw!" cried the widow. "The cure did not work! My son is sleeping among the pigs in the orchard this very instant!"

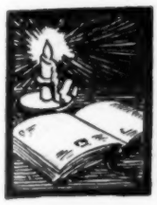
"Oh pshaw!" exclaimed Ambrose. "I can't believe it!"

"But it's true! I can hardly believe it myself. He was almost his own self once more yesterday afternoon and ate *(Continued on page 956)*

"These are the criminals," said Mr. O'Pshaw solemnly.

A DAY in the LIFE of BERTIE BEAR

A STORY IN PICTURES BY JOHN DUKES McKEE



New Books on Health

THE PROSPECTIVE MOTHER

THIRD EDITION. By J. M. Slemons. Cloth. Price, $2. Pp. 311. New York and London: D. Appleton-Century Company, 1934.

MORE and more it is being realized that the prospective mother can make childbirth more safe and less difficult if she is able to cooperate suitably with her doctor. In that cooperation an intelligent understanding of the processes associated with childbirth is necessary. After a simple explanation of the processes involved, Doctor Slemons provides sound and adequate advice relative to the care of the body, foods, hygiene, the complications and ailments associated with childbirth and the necessary preparations for the great event. There are concluding chapters on the time following the birth of the child and on the nursing of the infant. A good glossary defines the difficult medical words. This book is now in its third edition; it is well that its useful career should be continued.

MORRIS FISHBEIN, M.D.

A PRIMER FOR DIABETIC PATIENTS

FIFTH EDITION. By Russell M. Wilder. Cloth. Price, $1.75. Pp. 172. Philadelphia and London: W. B. Saunders Company, 1934.

THIS BOOK has passed through five editions; the first appeared in 1921. It contains simplified instructions for the use of insulin and for the planning of diets to meet all individual needs. There is good advice about the purchase of the equipment that a well ordered diabetic patient requires. Any intelligent patient with diabetes can help himself through the information contained in this book. Doctors will find that it answers most of the questions that even unintelligent diabetic patients ask. Moreover, its price recommends it.

M. F.

HEALTH IN HOME, SCHOOL AND COMMUNITY

By Lucy S. Morgan and Fay Morgan. Paper. Price, 50 cents. Pp. 55. Knoxville, Tenn.: The Patteran Press, 1933.

THE LAST fifteen pages are the most valuable part of this little book. In them will be found a suggested outline for group study and discussion accompanied by an exceedingly extensive bibliography. Both the outline and the bibliography are divided according to the following various aspects of health: foods and nutrition, sanitation, diseases, growth and development, mental and social hygiene, hygiene and economics. Following 8½ pages of bibliography there are listed forty-one journals and magazines, which contain valuable information on health, and forty-two organizations from which health education materials may be obtained. Parent-teacher associations and women's organizations should find such a compilation of source material an invaluable aid in planning health programs.

The major portion of the book is devoted to discussion of these same subjects, divided into parts relative to the home, the school and the community. Practical examples of how various teachers, schools and parent-teacher associations have worked to promote health programs should offer many suggestions to those interested in bettering their own local conditions.

Although the book is designed for the use of groups, attention is given to the fact that the individual teacher will always remain a highly important unit in a coordinated school health program. Both parents and child are her field in the final analysis, for little progress can be made if efforts at school are nullified at home.

DOROTHY M. BAKER.

PARTNERS IN PLAY

RECREATION FOR YOUNG MEN AND WOMEN TOGETHER. Prepared for the National Recreation Association and National Board, Young Women's Christian Associations, by Mary J. Breen. Paper. Price, 75 cents. Pp. 130. New York: National Recreation Association, 1934.

WHEN IBSEN'S Nora stepped out of her "doll's house," she stepped into a world of activity in which she could share; Nora was the prototype of the modern woman who wants to be a participator, not merely a spectator in life. Fortunately for the present-day Noras the modern Helmers are in accord with their wishes; they too want real partners. Mary J. Breen, realizing that the best time for young people to develop the interests and skills that will enable them to get along easily with one another is during their leisure hours, has written this book, "dedicated to a happier and richer leisure for both sexes, whatever the age, to make possible a real partnership in play." The material has been compiled primarily for recreation leaders of young people between 12 and 30 on playgrounds, in community centers, young men's and young women's associations, settlement houses and churches.

The book is written with a keen understanding of the psychology of youth and with a broad, liberal attitude that takes cognizance of the fact that "questions of behavior cannot be handled dogmatically by a yardstick formula." "Grown-ups seem to forget," Miss Breen writes, "that ability to get along with other people does not suddenly emerge with maturity. It is a slowly growing development that comes from being with people, talking to them and having different experiences with them." Bad form, the author recognizes, is frequently only a lack of good form and can be overcome by education more effectively than by legislation. Tolerance, patience and a genuine desire to understand the problems of adolescence and youth are important planks in the platform of the candidate who would be a leader of young people.

A suggested list of recreations for mixed groups of young men and women is appended, and an excellent bibliography is given at the end of each chapter.

LEOLA J. HARRIS.

Bill Leaves for School

By BEATRICE F. SEGAR

Have you ever seen a boy of ten start off for
school at eight?
His bright face shines, his teeth are brushed,
he's slicked his hair down straight;

He's even cleaned his fingernails and
scrubbed his knuckles white,
Tucked in his shirt, pulled up his pants and
tied his shoestrings tight.
He's eaten breakfast quietly before he's
read the jokes,

Put on his hat, zipped up his coat, said
good-by to the folks.
He's gently closed the door and then has
gone without delay!
Your boy of ten may do those things;
mine's just the other way.

SCHOOL AND HEALTH

A Department Conducted by J. MACE ANDRESS, Ph.D.

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The Place of the Textbook in Health Education

IN NO COUNTRY in the world has the textbook played such a conspicuous part in education as in America. Other countries of the world have depended largely on their teachers to present facts. Since books for children first found their way into schools, there has been little improvement in textbooks abroad, but here in America the genius of the American teacher and educator has expressed itself in textbooks. The results in general have been most satisfactory. It was found that new theories and methods could be introduced effectively through such books. All one needs to do is to pick up an old-time book and read at random and then pick up a modern reader to discover that theories of life and education have changed. In Webster's famous old spelling book of a century ago we read, "Boys and girls that mind not their books, and love not the church and school, but play with such as tell lies, curse, swear and steal, will come to some bad end, and must be whipt till they mend their ways." Such a selection enables one to glance back through the dim aisles of history. How different is the modern book with its stories, beautiful illustrations and enticing problems.

Books on physiology and hygiene have shared in this general advance. Beginning with dry anatomy and physiology, as dry as a skeleton itself, it has slowly become conscious of the need of actual instruction and training in health behavior rather than in the memorizing of facts. Health textbooks have so shared in the general advance in education that it is fair to say that they are unexcelled by books in any other field. If one wishes to go further and inquire about the origin of this remarkable enthusiasm in American schools for drinking milk, eating green vegetables and pursuing other health activities, one must assuredly give much of the credit to American textbooks on health. European countries have not yet seen the need of having, in the grades, a special textbook on health, and health teaching there is largely nonexistent.

In spite of eulogies to American textbooks in general and health textbooks in particular, the fact remains that textbooks are frequently misused. Too often even now a certain number of pages are assigned, and pupils report mechanically on what they have read. It is the old story of memorizing. The newer method of health teaching begins with the health needs of children and then instructs them in relation to satisfying those needs. The old method would have children learn about the value of drinking milk whenever it came in the text even though 100 per cent of the pupils were drinking milk. The newer method would select those problems for pupil study which arise from a study of the children themselves and their environment. That portion of the textbook would then be used which would help them to solve those particular problems. In this way the text would be used with a purpose beyond that of committing words to memory; it would be used to get control of some concrete situation.

There are some teachers who have a tendency to drop the textbook. They accept the modern idea that health is a way of living and that this end is achieved when the child learns to live wholesomely and purposefully. The training of the child in initiative and judgment, in actually living healthfully, seems so important that the importance of the textbook is minimized. It is always true that the teacher who is well trained and has a genuine sense of health values will need less guidance from a school textbook, but the teacher who has an inadequate school library and an inadequate community library for the reference of the pupils would be greatly crippled without a textbook in the hands of the pupils. In the upper grades, especially in rural schools where the teacher has many grades, the textbook is most helpful.

The better textbooks today cover problems that really arise in practically every school. The wide-awake teacher will realize, as some of the textbook makers have, the desirability of motivating the reading and of studying of every chapter by connecting it with special problems in school life. Thus before beginning to read a chapter dealing with cleanliness, pupils might consider the need of cleanliness in their own environment. This method would tend to make the textbook valuable to the child.

SOLVING HEALTH EDUCATIONAL PROBLEMS

Where May Teachers Look for Help in Health Teaching?

SUPPLEMENTARY MATERIALS ENRICH THE HEALTH TEACHING PROGRAM

THOMAS D. WOOD

Professor Emeritus of Health Education, Teachers College, Columbia University; Chairman of Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association

WIDE-AWAKE teachers today are keenly alert to the idea of helping their pupils to fuller lives through healthful living. They are eager to use all available means to improve methods in teaching for health. Some teachers have courses of study in health education which they are expected to follow; even with such prescribed teaching programs, in many instances teachers are permitted or encouraged to enrich the program with supplementary references and materials which they consider suitable for their classes.

Where teachers are not provided with programs, outlines or textbooks and specific directions, they are, of course, more largely or wholly dependent on their own plans. Under any circumstances finding the best helps for health teaching is a stimulating, challenging and somewhat difficult or complicated game for the classroom teacher.

Where then may teachers look for help in health teaching? Under ideal or optimum conditions, and such conditions are reached, or at least approached, in a few schools, classroom teachers are given helpful and constructive guidance in the health teaching program by supervisors or counselors who are

professionally well qualified by knowledge, skill and tact for this important service. From such supervisors who are assigned to give full-time or part-time attention to the health program, teachers should get definite aid toward making the best use of prescribed courses of study and assigned or adopted textbooks when such are used; good textbooks in the health field are of great value if skilfully used and supplemented by up-to-date, dynamic and sound health literature of various types. The supervisor or principal has an important and responsible task in evaluating, approving and recommending supplementary health materials which are scientifically and pedagogically sound. Of course, on school executives and special committees devolves also the function and responsibility of selecting and adopting textbooks for official use in the school system of the community or the state. Competent classroom teachers may be included advantageously in textbook committees.

Educationally sound methods for health teaching should come always from educational sources; such methods are acquired by the teacher desirably, but unfortunately not usually, in the normal school or teachers college, in connection with general education principles and methods. Teachers in service should expect and receive without disappointment or neglect, definite, constructive help in adopting and applying approved educational methods to health teaching. The criteria of educational method should be applied to all phases of the health education program, not only to materials officially adopted by the schools, but even more to literature coming from sources outside of the schools. Further, these tests of valid method used in the more systematic health instruction should be applied also with equal thoroughness in the incidental experiences at any time in the school day where such experiences may exert vital influence. This is often more effective than formal instruction in the health education of the pupil. A genuine understanding of an integrated school health program carries one to the conviction that the actual results of health teaching are registered not only in physical well being, but also in mental and emotional health, in social personality and in character.

To Contributors:—Although most of the articles in the column "Solving Health Educational Problems" are solicited, the editor of this department will be glad to consider contributions which deal with concrete and practical health education procedure in the school. Articles must not exceed 1,000 words.

Health knowledge as differentiated from health teaching methods involves a wide range of authentic information regarding the many aspects of health. This is essential to furnishing the scientific explanations and sanctions for the attitudes and motives which determine health behavior and habits at the time and later. From what sources shall the teacher obtain or receive such material? To take the place of, or to supplement the materials provided by the course of study, authoritative health literature may be supplied by the federal bureaus in Washington, such as the U. S. Office of Education, the Public Health Service, the Department of Agriculture or the Children's Bureau. In some instances state departments of education and state departments of health issue bulletins and reports that are helpful to teachers and parents. Departments of health in some cities and counties furnish useful and reliable health literature. The official educational and health agencies stand as the first line of authoritative and dependable sources of health bulletins for the schools. Interesting information covering many phases of health is also supplied by HYGEIA.

From another type of source come the health publications in wide variety from national health and welfare associations which are not financed except in incidental part by the sale of such publications. These voluntary associations are to be distinguished from commercial organizations whose distribution of health bulletins serves in important degree for advertisement of products sold by the companies.

An example of valuable service from a voluntary agency is the provision of a periodical for children in the upper grades entitled *Spyglass,* published by the American Child Health Association. This periodical offers exceedingly interesting subject matter in a broad setting of individual, home, community and world experiences, planned for use in progressive classrooms. Through its pages the principles of healthful living are presented as an integral part of daily life, thus illustrating the essential oneness of health education with the rest of the classes.

The commercial or business organization whose health information may be considered most accurate and dependable is the life insurance company, an important part of whose business is to spend large sums of money in buying prolonged life and improved health through health education, not only for those insured in the company, but for the general public.

From commercial organizations in general there issues today a flood of health pamphlets, with intensive promotion in each case of the sale of the products involved. These pamphlets present many kinds of health information, some of which is accurate scientifically, the rest seriously not accurate; some are balanced in emphasis, the rest much exaggerated. These pamphlets, tables and posters from commercial sources need careful evaluation. These materials appeal to many teachers partly because in most instances they are free. Free health literature may be attractive and appealing but its essential value depends on other qualities than those just mentioned.

Many statements and articles dealing with health appear in popular monthly and weekly periodicals, and in newspapers. Some of these articles are not only dramatic in appeal but fairly accurate and reliable, while some or many of them are decidedly the opposite. The fact that a health statement or article appears in a general newspaper or magazine, in good standing, is unfortunately no guarantee of its reliability. In some instances, however, the authors of such articles are health authorities of high standing.

To those who may consider the suggestions or advice in this article lacking in definiteness, let it be confessed that the writer believes firmly that teachers in many instances cannot be sure of the best places to look for help for health teaching without expert advice in this field, which is fundamentally the most important and at the same time the least exact of the applied sciences.

INTEREST CENTERS ARE APPROACHES TO STUDY OF HEALTH

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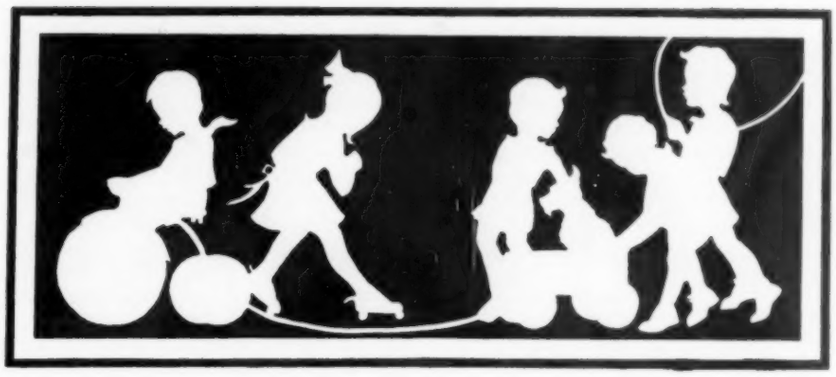

RECENTLY the question, "where may teachers look for help in health teaching?" was asked a class of forty elementary school teachers. The reply surprisingly revealed that thirty-nine of these teachers were familiar with national health organizations, which might be expected to furnish printed material for health teaching, and also with textbooks on the level of pupil and teacher. One lone teacher wrote suggestions for finding interesting and worthwhile material in her immediate environment.

The environment is teeming with "interest centers" which may be used by the teacher as approaches to units of study in health education. The problems relating to personal, community and racial health are everywhere present. It is the part of the teacher to guide and to direct pupils in the selection and solution of meaningful health problems. Because these problems represent life situations, children are interested in them. Motivation is present. If one engages in finding and solving the health problems closely related to one's own living, it is expected that behavior is effectively changed. A. Gordon Melvin has said, "Teachers too often have erred by failing to understand the significance and the function of environment in the development of the child. The environment is what children live by, what they grow by, what they appropriate to themselves and by the stronger alchemy of the psychologic processes transmute and transform into personality."

The environment not only produces interest centers, or health problems; it also furnishes materials which help to solve problems. When children are guided on their own level to seek intelligently materials which help to meet their own needs, they are experiencing growth. Self direction is taking place. Individual thinking and cooperative acting are resulting. Adjustment to present and future situations is being made possible.

The curriculum in health is more and more being interpreted in terms of a series of units of conduct through which the child lives. In this sense a unit is to be conceived as a body of material to be understood rather than to be memorized. Every unit has a specific contribution to make in advancing healthful living. Each may be considered an objective which, when achieved, contributes to and is compatible with the aims of general education.

The motivating power of the unit is the intention of the child to learn; not the intention of the teacher that he should learn. Related units should be built when and as they are needed. They should be designed with reference to the group being taught and to the existing environment. A series of approved units in health would be superficial and superimposed on pupils with little regard to interest. The curriculum in health can never be definitely established.

The community is an essential and dynamic aspect of the content core of the curriculum. It is the teacher's part to explore her community and to become thoroughly familiar with the health materials found there. Organization and integration are essential if healthful living is to result. The various types of health materials which a teacher may expect to find in her community may be listed as: orientation or environmental, printed, illustrative, constructive, experimental, and assimilative.

Orientation or Environmental Materials. If one accepts the theory of learning through doing, the school is full of opportunity for right reacting to such health situations as comfortable seating, correct lighting, adequate ventilation, rest and play periods, the lunch period, a social and sympathetic school atmosphere, and toilet and handwashing facilities. These are the materials one uses daily in forming right habits of living. The community, too, is full of resources which extend one's previous experience or perhaps give one new experiences. Among these are the dairy, the water supply system, a beautiful garden, the market, the fire station, a visit to the hospital, the clinic, the physician's and the dentist's offices, and a pleasure trip to the country, the seaside, the lake or the municipal playground.

Printed Material. Learning here is on a different level. Information is sought to make more effective and meaningful the activity in which one is engaged. Material is chosen not on the basis of gaining facts about healthful living but on the basis of showing teachers or pupils how to do something they greatly wish to do. Health textbooks for pupils and teachers serve as a source of organized information. Not to be memorized but to serve in enriching unit content, reference books and periodicals should be at hand for research; textbooks in other subjects furnish meaningful relationships. In one's own community are found sources of bulletins which contain a wealth of scientific data closely related to the health problems of the immediate community. The state board of health, the medical and dental societies, the tuberculosis association, the agricultural and home economics extension service furnish much the same service in all the states; the general extension division of the state university may offer a package library service with clippings on any health topic and may lend textbooks on the pupil's or the teacher's level. Courses in health education, physical education and public health for college credit may also be had through this service.

Illustrative and Demonstration Materials. These make more meaningful the facts one reads from the printed page and include pictures, posters, charts, ready-made graphs and models. An interesting lower jaw of a rachitic infant was shown by a dentist to a health education class. The porous structure due to diet deficiency was an indelible lesson. Seeing a demonstration of the best type of tooth-brush and an approved method of brushing is more effective than reading about it.

Constructive and Creative Materials. These are even more valuable because children imagine or visualize what they wish to make and then create or construct the finished product. It may be simply an original poster, chart or graph; it may be a scrapbook or an unusual note-book; it may be the preparation of a meal or plans for entertaining one's friends; perhaps it is making screens to protect against flies or mosquitoes, or better still a boat may be built for pleasure. An aquarium or a house for pets may be a group project.

Experimental Materials. These are essential for establishing the scientific point of view. The experiment may be a simple one in feeding pets or growing plants; it may be watching the evolution of the life history of the mosquito or the moth; it may be testing drinking water or milk; it may be counting calories and balancing diets; it may be determining the most effective mouth wash; it may be a blood test or the isolation of disease germs. The school and community offer facilities for all these.

Assimilative Material. This is the means to the end in modifying conduct, the process of rationalizing contributions from all types of materials. It is the broader understanding in terms of self direction which should come through the use of well chosen materials.

EVERYDAY EXPERIENCES OF PUPILS OFFER SUGGESTIONS

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"WANTED! Teachers to Enlist for Health Service," an appeal made fifteen or more years ago by the U. S. Office of Education, has been responded to so enthusiastically that some type of health education is undertaken in practically every school, rural or urban. However, an awareness of pupil needs, interest in child health, and zeal and enthusiasm in promoting health have far outdistanced the development of practical methods and other essential educational tools. Actual experiencing of healthful practices accompanied by personal satisfaction in achievements is infrequently noted as an integral part of the school health program. Teachers may be observed scurrying hither and yon, sometimes frantically, seeking aids in the challenging though seemingly elusive matter of health instruction.

When health as a wholesome way of living becomes a guiding principle, one of the most basic and fundamental approaches to health instruction emerges. Commonplace, everyday routine events are recognized as dynamic materials. Children are helped to live more satisfactorily in their immediate environments, teaching being based on the familiar, that which goes to make up everyday living. Instruction of this type naturally must follow a study of the home, the school and the community. Specific items which operate as integral parts of home and school life are school and classroom environment, health examination results, school nurse service, lunchroom or cafeteria, box lunches, other school services, community health and social service organizations, clinics, food and water supplies, food habits, health habits, school and community recreational facilities, and school and community health hazards.

Cleanliness is a habit which receives universal, theoretical emphasis, and the unfortunate pupil who disregards it too frequently is subjected to scathing condemnation. Recently, the Honorable Frances Perkins stated that bathtubs are found in a small percentage of town homes and to a lesser degree in rural homes. In view of these facts if children are to learn thoroughgoing habits of cleanliness, must not the family wash-basin or the tub be glorified and actual training in effective technics of bathing, when water and toilet articles are scant and privacy difficult to secure, be provided? A waterproof doll serves admirably as the subject, and an introductory demonstration may be given by the school nurse.

A study of community resources that reveals a deficiency of fruits, vegetables and fresh milk indicates a need for stressing the nutritive values of tomatoes, cabbage and other available, cheap vegetables and their use as substitutes for the more expensive protective foods, such as citrus fruits; a comparative study of evaporated milk in lieu of fresh milk will also be profitable. Certainly practical education along these lines is often needed. It was discovered that in one school district, too isolated to be served by a commercial dairy, families were living on diets composed largely of sweet potatoes and but one family owned a cow.

During a nature club discussion, a rural teacher unconsciously expressed her appreciation of the richness of the immediate school environment. This enthusiastic person after saying, "You must see what we have to work with," raised a window shade, which had been lowered to exclude direct rays of the sun, thereby revealing a delightful grove bordered by a charming brook. A city teacher would have been truly envious of this ideal natural laboratory situated at the very back door of the school.

The illustrations cited may be helpful in clinching the thought that the first approach to health instruction is through the commonplace, everyday experiences of pupils, thereby converting the humblest situation into a means for increasing happiness and satisfaction.

Enthusiastic interest in "In-Service" training is probably the result of better teacher preparation for other phases of school work than for health instruction. Educational endeavors, individual and group, manifest themselves in a variety of ways. Assistance from local and state supervisors is sought, extension and summer school courses are taken, schools and health centers are visited, conferences and meetings are attended and literature of various types is requested. As an emergency measure devised to combat certain destructive effects of the economic crisis, one state gave credit for extension courses conducted by county helping teachers, whose services were offered gratis. Teachers availed themselves of this opportunity in an enthusiastic manner. In one county the group was subdivided into three sections on the basis of interest in government, health or nature. Incidentally, enrolment was larger in the health section than in either of the other two sections. Observation supports the theory that useful tools for experimental teaching may be evolved through some one, or more, of the available types of "In-Service" education.

A few publications of exceptional merit are: "The School Health Program," White House Conference on Child Health and Protection, price, $2.75, The Century Co., New York City, 1932; "Health Education," Joint Committee on Health Problems in Education, price, $1.25, National Education Association, Washington, D. C., 1930; "Health of the School Child: A Self-Survey of School Conditions," Circular 35, single copies free, Office of Education, U. S. Department of the Interior, Washington, D. C., and "An Outline of Suggestions for the Conduct of School Health Inspection," Joint Committee on Health Problems in Education, single copies free, American Medical Association, Chicago.

Certain organizations are offering educationally and scientifically acceptable material at little or no cost. Having one's name on the mailing list of such organizations as the American Child Health Association, the Metropolitan Life Insurance Company, the National Tuberculosis League and the National Society for the Prevention of Blindness insures receipt of material as soon as it becomes available.

NEW HEALTH BOOKS
for teachers and pupils

WORTHY home membership is rightly recognized by educators as being one of the seven great aims of education. Dr. Lemo T. Dennis in her excellent textbook, "Living Together In The Family," [1] offers a guide to the study of family relationships. How logical it is that an institution that is recognized as the foundation of society should be the object of serious study. Successful relations in the family do not just happen; they require intelligent thought. The book considers problems that actually arise, and case study material is used generously. At the end of chapters there are stimulating suggestions for class discussion. The selected references are especially good and include novels, biographies, magazine articles and textbooks.

The author has had a broad experience as a home economics teacher and director of a home-management house and has conducted conferences with teachers and workers interested in family relationships throughout the country.

This book should be especially useful to parent study groups, 4-H Clubs and other groups wishing to carry on constructive discussions of family relationships from the point of view of real home situations.

GOOD PRINT, attractive illustrations and interesting content are the outstanding points in Book II of "Health Stories," [2] and it promises to be a helpful series for teachers. The stories grow out of natural situations in which health lessons are prominent. The stories are grouped around the following topics: Keeping clean and neat, taking care of the body, eating the right foods, keeping well, safety, and keeping happy.

THIS little magazine, *Understanding the Child*,[3] published by the Massachusetts Society for Mental Hygiene, devotes its June, 1934, issue to "The First Years of School Life." The October number will consider "The Classroom Teacher and Mental Health," and the January number "Motivating Children to Learn."

1. By Dennis, Lemo T. Price, $1.10. Pp. 187. Washington, D. C.: American Home Economics Association, 1934.

2. By Towse, Anna B.; Matthews, Florence E., and Gray, William S. Price, 68 cents. Pp. 176. Chicago: Scott, Foresman & Co., 1934.

3. Single copies, 15 cents; one year, 50 cents; three years, $1. Boston: Massachusetts Society for Mental Hygiene.

ANY ONE who is interested in health education cannot afford to miss reading this excellent report of the seventh health education conference arranged by the American Child Health Association and held at the University of Michigan during the summer session last year. It is properly called "Advances In Health Education," [4] for the reviewer, to get perspective, turns back to the previous reports of this association and recalls the first conference when a handful of pioneers gathered in New York for a one day meeting. The progress that has been made is impressive. There is not only a clearer definition of objectives and a greater variety of methods, but there are significant reports of things done in the field. Instead of being "the yellow dog of the curriculum," as hygiene was once called, it now appears in a vitalized form. Unlike most reports this book is not a mere reproduction of the speeches delivered but bears evidence on almost every page that a conference is being reported. It is a good book for teachers to read before beginning their work in the fall.

THE METROPOLITAN Life Insurance Company, which has done so much for teachers and children through the publication of many helpful pamphlets on health, has again earned the gratitude of schools through a new publication, "Health Through The Ages." [5] Within these few pages, Dr. Winslow and Miss Hallock have condensed with great skill some of the most dramatic incidents in the history of medicine from the earliest time down to today. A helpful historical chart accompanies the text.

TEACHERS who are interested in preschool education will find this book, "Children of Preschool Age," [6] filled with solid information and many helpful suggestions. As is well known, most serious maladjustments of children begin during the early years of childhood. This volume gives the result of an analysis of several hundred individual children from nursery schools and the behavior clinic of the Institute of Juvenile Research. In the case study material presented, one may trace the beginnings of serious later day problems. This book is not written in popular form and is to be recommended only to those who have already read and studied in this field.

4. Pp. 305. New York: American Child Health Association, 1934.

5 By Winslow, C. E. A., and Hallock, Grace T. Pp. 64. New York: Metropolitan Life Insurance Company, 1934.

6. By Kawin, Ethel. Price, $3.50. Pp. 340. Chicago: University of Chicago Press, 1934.

A BIBLIOGRAPHY
for solving health education problems

Advances in Health Education. Price, $1.50. Pp. 306. Reports of Health Education Conferences. New York: American Child Health Association, 1933.

Makes available descriptions of functioning teaching programs.

Health Education. Price, $1.25. Pp. 251. Report of the Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association. Washington, D. C.: National Education Association, 1930.

Offers both subject matter and suggestions for teaching units.

Principles and Practices in Health Education. Price, $1.50. Pp. 485. Reports of Health Education Conferences. New York: American Child Health Association, 1930.

State Departments of Education.

Many states have recently published helpful courses of study or teachers' manuals to guide teachers in health teaching.

State Departments of Health.

Many states have excellent bulletins on the various health problems of children of school age.

The School Health Program. Price, $2.75. Pp. 400. Report of the White House Conference on Child Health and Protection. New York: D. Appleton-Century Company, 1932.

Gives basic principles and has an excellent chapter on outside agencies making contributions to the school health program.

U. S. Department of the Interior, Office of Education, Washington, D. C.

Publishes pamphlets and bulletins concerned with school health activities.

Winslow, C. E. A., and Williamson, P. B.: Laws of Health and How to Teach Them. Price, $1.60. Pp. 354. New York and Chicago: Merrill, 1925.

Offers subject matter needed by teachers with some suggestions of teaching method.

QUESTIONS AND ANSWERS

Serum for Heart Disease

To the Editor:—My husband was advised to take serum treatments for a heart condition diagnosed as myocarditis. The serum has no trade name and is prepared by the Rockefeller Institute in New York. There will be forty-two injections into the veins; it is claimed to be a treatment no longer in the experimental stage and to have no unfavorable reaction. The treatments are given every second day, starting with a small amount of serum which is gradually increased; it is claimed that the effects are permanent. The cost is $170, and the money must be paid in advance; it is claimed that the Rockefeller Institute sends the physician payment for his services. I think it is the fact that the payment must all be made in advance and that the financial arrangement seems so rigid under our present circumstances that is the basis for my desire for some check-up. It is claimed that it is imperative that this serum treatment is started without delay, and immediate action has been urged as it will take three days to procure the serum after the money is procured.

M. S. J., Illinois.

To the Editor:—My mother has high blood pressure and heart trouble. She takes digitalis, but her doctor advises a series of serum treatments costing $50. It would be difficult for us to get that much money, but if it would be really helpful we would try. Do you advise these serum treatments for high blood pressure or heart disease?

E. K., California.

Answer.—No serum treatment for myocarditis or arteriosclerosis is known, neither is there any reason to suppose that a serum treatment for these conditions would be of any value.

No instance is known in which the Rockefeller Institute has ever sent out serum products for which the patient is charged, nor is it known that the Rockefeller Institute ever compensated a physician for his services to patients. The Rockefeller Institute is a research institution.

The director of the Rockefeller Institute for Medical Research, when the inquiries were called to his attention, replied as follows:

"Of course, the Rockefeller Institute prepares no such 'serum' and authorizes no one to act for it in the manner indicated."

Attention should also be called to the fact that demanding payment in advance from a patient is not the procedure followed by ethical physicians but is the common practice of quacks and charlatans. No one should be asked to pay for medical service in advance.

Burns

To the Editor:—Can you give me the physiologic explanation of the fact that a finger, burned on a hot pan or oven, if held in the heat of a gas flame or immediately over a coal fire for a few seconds or until the intensity of the pain is reduced, will be free from pain or soreness afterwards? The burning sensation for the few seconds is, of course, severe but many persons feel it worth while because of the freedom from the lingering soreness which a slight burn sometimes produces.

E. L. W., New York.

Answer.—Holding a finger which has been burned on a hot pan or oven in the heat of a gas flame, or over a coal fire, is a practice not to be recommended. If any relief from pain is felt, it may be because of the fact that nerves which have been irritated by the slight burn are paralyzed by additional insult. These home-made methods of first aid seem to have a charmed life. Regardless of what scientific comment may be made about their illogical character, they seem to have an appeal, and probably they will long continue to be practiced.

Correct treatment for a slight burn consists in the application of an ointment which, by keeping the air away from the irritated or partially exposed nerves in the skin, will relieve the pain. Ordinarily, white or yellow petroleum jelly, not medicated, is as good a first aid treatment as any. Many housewives know that the application of sweet butter, olive oil, or fresh, unsalted cooking fats will relieve burns.

If you have a question relating to health, write to "Questions and Answers," HYGEIA, enclosing a three-cent stamp. Questions are submitted to recognized authorities in the several branches of medicine. Diagnoses in individual cases are not attempted nor is treatment prescribed. Anonymous letters are ignored.

Sugar Tolerance Tests in Diabetes

To the Editor:—I have a mild case of diabetes—one that does not require the use of insulin. I am a man 31 years of age, and I have had diabetes for about two and one half years. Am I correct in concluding from results of Benedict tests that if the solution remains clear and blue, the specimen of urine contains no appreciable amount of sugar; that if a heavy, greenish precipitate is formed, the specimen contains a trace of sugar; that if a yellow precipitate is formed, the specimen contains about 1 per cent sugar, and that if a red precipitate is formed, the specimen contains at least 2 per cent sugar? Is it harmful to a diabetic patient if his urine practically always contains a trace of sugar, as defined above? Is it harmful if his urine contains about 1 per cent sugar for a few hours after each meal but if the sugar does not persist throughout the 24 hour period? Is coffee particularly harmful to a diabetic patient?

S. R. H., Minnesota.

Answer.—One is correct in assuming that there is no sugar if the solution remains clear and blue, that the specimen contains a trace of sugar if a heavy greenish precipitate is formed and that the specimen contains in excess of 1 per cent of sugar if a yellow precipitate is formed. The test is not a quantitative one, however, and the exact percentage of sugar evidenced by yellow and red precipitates cannot be estimated except roughly.

It is impossible to say whether the presence of traces of sugar as defined above is harmful in a given case. Occasionally the presence in the urine of creatine or other reducing substances gives a slight reduction, which, of course, means nothing. Also there are some patients who seem to remain well although the urine shows traces of sugar. In the majority of cases it is better to have the urine free of sugar. If this can be accomplished, it is desirable.

The presence of as much as 1 per cent of sugar in the urine after meals is difficult or impossible to avoid in many cases. If it can be avoided, it should be.

When used in moderation, coffee is not particularly harmful in diabetes.

Over the TOP!

A WHOOP, a jump, and a pounce. Leap frog is great sport. And great exercise for lithe, healthy bodies. Muscles tense and flex. Joints move as smoothly as lubricated bearings.

And like any finely adjusted mechanism these human "bearings" should be guarded. For some 20 to 30 diseases may affect their function. These diseases range from the "growing pains" of childhood to chronic, deforming arthritis. But in most cases they do not strike suddenly, so with proper care they need not menace health.

Freedom from the serious effects of these diseases—in fact, from almost every disease—is surest when your physician has the opportunity to detect and treat disorders in their earliest stages while they are most easily cured. The periodic health examination offers him this opportunity and x-rays give him invaluable aid.

X-ray examination provides important diagnostic information about practically every part and organ of the human body. The graphic evidence that the radiographs present often is obtainable in no other way.

Mail this coupon for the booklet, "X-rays and Health," which describes the important part played by x-rays in maintaining health.

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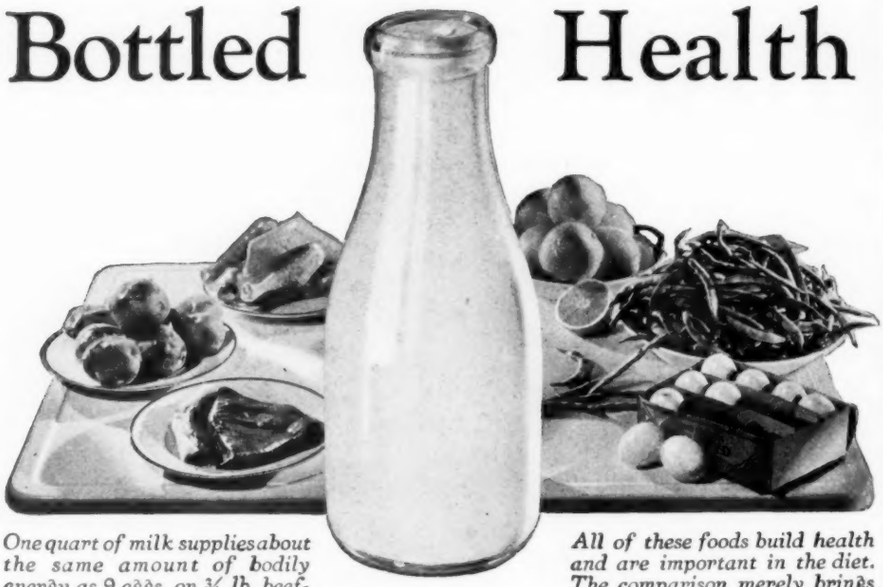
Bottled Health



One quart of milk supplies about the same amount of bodily energy as 9 eggs, or ¾ lb. beefsteak, or ⅓ lb. chicken, or 6½ oranges, or 2 lb. potatoes, or 3 lb. string beans.

All of these foods build health and are important in the diet. The comparison merely brings out the essential part that milk plays in contributing fuel or energy to the diet.

MILK, as an all-round food, is one of the most essential of our everyday foods. Milk gives you much for little. In choosing your foods, be sure that milk is among the first on the list.

For health, milk is conceded to be the almost perfect food. It contains practically all the elements that the human body needs: minerals, vitamins, proteins, sugars and fats—all necessary for building a healthy body and for warding off disease.

The form in which milk is taken is not important. Some persons like it cold. Others take it when they are ready for sleep and prefer it hot. Still others like it better when it is flavored with cocoa or chocolate or used in soups, sauces or desserts.

Milk should not be regarded as a beverage; it is a food. Sip it slowly; get the flavor out of it. Don't use it merely to quench thirst, and don't drink it rapidly. The gastric juice of the stomach causes milk to curdle shortly after you swallow it. If milk is drunk rapidly digestion is likely to be slow and difficult.

Children especially need plenty of milk. Rest has no charm for them. No healthy child will stay parked while awake. He waits a minute or two perhaps, and then he is an acrobat again. An active, growing child must have fuel and building material for his body. Give him good, fresh milk—a quart a day if you can. And give the grown-ups a pint a day. For underweights and convalescents, a quart. For expectant or nursing mothers, a quart.

Milk has unsurpassed food value. To take milk regularly is the surest and easiest way of making certain that you give your body the variety of food materials it needs to keep you in good physical condition.

To know milk as you should know it, ask for a free copy of the Metropolitan booklet "Milk—An All-Round Food." Address Booklet Department 1034-Z.

METROPOLITAN LIFE INSURANCE COMPANY
FREDERICK H. ECKER, PRESIDENT ONE MADISON AVE., NEW YORK, N.Y.
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Poliomyelitis—Latest Development in San Francisco Area

To the Editor:—Information is desired on the most recent developments and number of cases of poliomyelitis in the San Francisco area.

A. A. S., Illinois.

Answer.—The American Medical Association has no direct means of ascertaining the developments in the progress of epidemics in remote cities. Perhaps the best means of keeping in touch with the situation is through the daily newspapers which bring the latest reports obtained directly from health authorities on the actual scene.

Case reports are made by local physicians to the local health department. The local health department reports cases to the state department and directly to the U. S. Public Health Service at Washington, D. C. After about four weeks, the Public Health Service makes these consolidated reports available in its weekly public health reports. Because of the lapse of time due to consolidating reports and getting them into print, the only information the Association has would be about four weeks old, except for what can be gathered from the daily press by any reader.

In any event, attention is called to the fact that the number of active cases in any epidemic of poliomyelitis is relatively small at one time and that San Francisco is a good sized city. In the event one contemplates visiting San Francisco, the danger of exposure would be relatively small. There is always, of course, the possibility of exposure in any city.

Brownish Discoloration on Teeth

To the Editor:—My teeth are in perfect condition but I am annoyed with an ugly, brownish stain between each tooth and on the biting surface. I seem to have this trouble only where my tooth-brush cannot reach and thoroughly clean the teeth. Is there any way to remove this?

A. B., North Carolina.

Answer.—The presence of brown stains on the teeth is not unusual. They may be caused by various conditions which would have to be traced down by a careful survey of the patient's habits. Inasmuch as it is apparently impossible for many individuals to clean all the tooth surfaces, even with the most careful brushing, it becomes necessary to have the stains removed at regular intervals by a dentist. Ask your dentist for a brushing technic that will enable you to clean your teeth more effectively.

Dentures

To the Editor:—I am much interested in M. R. O'Leary's article on "False Teeth," in the June HYGEIA, as I finished having mine extracted early in April and got my dentures the latter part of May. I have had almost no trouble with the upper set but every week, and sometimes twice a week, I have had to go back for adjustments on the lower plate. The dentist insists it will be better to leave them several months until more shrinkage has taken place before making over the dentures permanently. Will this irregularity hurt the contour of my face? Also, especially at night, the lowers move and click against the uppers. Will this wear off and injure the edges? I have at times a gritty feeling in my mouth for which the technician cannot account, as he smoothed the edges after grinding down the back teeth to fit. I would like to leave the lowers out at night to avoid this but have read that drooping of the corners of the mouth will surely follow if dentures are removed at night. Will it be detrimental to the shape of my face and jaws, if, when it is hard to get to the dentist, I remove the lowers for several hours to rest a sore spot? Which is best, to keep trying to leave them in or to remove the lowers at night? What is your opinion of powders to hold dentures in place and cushion sore spots?

H. H. A., Florida.

Answer.—The alveolar process of both the upper and lower jaws will continue to absorb or to shrink for a period of several months. It is advisable to use the present set of dentures until complete absorption has taken place, at which time the present dentures can be refitted or if necessary a complete new set made. It is doubtful whether the clicking together of the teeth will injure their edges unless one has an extremely strong bite. The gritty feeling is probably the result of the fact that in the grinding of the teeth, the high glaze was removed from their surfaces leaving the slightly poroused body exposed which no amount of polishing will completely eliminate.

There should be no serious effects from removing dentures at night. This is a common practice and is advised by most dentists. There are a number of powders on the market which are helpful in holding dentures in place in the mouth. If sore spots occur, the dentures should be treated sufficiently by the dentist to relieve the undue pressure and irritation.

NO, ROGER! NO! NOT A BITE UNTIL YOU WASH THOSE DIRTY HANDS
I HATE TO SCOLD HIM. BUT HE SIMPLY WON'T WASH HIS HANDS WITHOUT BEING TOLD
OH, YES, HE WILL JANET—IF YOU GET HIM A LIFEBUOY WASH-UP CHART. IT MAKES A GAME OF KEEPING HANDS CLEAN
WELL, I TOOK MARGE'S ADVICE. HERE'S THE WASH-UP CHART NOW LET'S SEE WHAT HAPPENS!
WASH-UP CHART
A MONTH LATER
HANDS CLEAN, SON?
LOOK AT 'EM, AND DAD, YOU OUGHT TO SEE MY WASH-UP CHART. I'VE GOT A 100% CLEAN HANDS SCORE

SOMETIMES mothers have a lot to learn about clean hands. They often fail to realize that simply because they make washing hands so much of a *duty*—children just naturally rebel, get to hate soap and water.

But try a Lifebuoy Wash-up Chart on them and you'll see the balkiest children become "little angels" with regard to washing hands. The Lifebuoy Wash-up Chart is really a score card, with a space to be checked for each time hands are washed. *Of course,* these "won't-wash" youngsters are going to try for the highest score! It's a game! And loads of fun, too. They're bound to like it.

The Lifebuoy Chart does you a greater service. It teaches in a picture-story way, how hands pick up germs from practically everything we touch—that, as the Life Extension Institute reports, 27 germ diseases may be spread by hands. It instructs that washing hands often — *always before meals* — with rich-lathering, coral-pink Lifebuoy Soap, helps protect health. For Lifebuoy removes not only dirt, but *germs* as well.

FREE: Help yourself to peace of mind about dirty hands. Simply fill in and mail coupon below for FREE Lifebuoy Wash-up Charts and school-size Lifebuoy Soap for each of your children. Then see those hands reform!

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Please send me, free, Lifebuoy school-size cakes and Wash-up Charts for my.....children.

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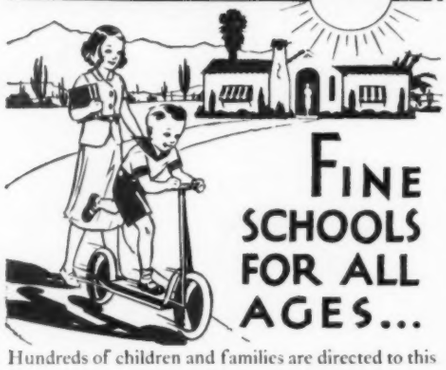

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Exercise Often Helps!

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The TEETERBABE JUMPER SEAT

Write for Circular Giving Complete Facts

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Milk in the Diet

To the Editor:—Can a meal be balanced if it consists largely of 1 quart of milk, or does an adult need more solid food?

G. R. M., Illinois.

Answer.—A balanced meal cannot be made of milk alone. Milk is lacking in adequate amounts of vitamins C and D, as well as in iron. Moreover, 1 quart of milk furnishes only about 640 calories, and therefore an adult would have to drink at least 4 quarts a day to get enough calories to supply the needs of the average individual who is not overweight and who is doing work which includes a moderate amount of physical exertion.

There is great value in a balanced and varied diet in which milk should be prominent but which must also include fruits and vegetables, enough meat, eggs, cheese or other sources of protein, carbohydrates, and fat other than the butter-fat in milk.

Foods

To the Editor:—I am writing you for information regarding predigested foods. I cannot find any formulas or anything on the market under that name. I used an infants' vegetable preparation because the patient had to be fed by tube.

M. M. J., Florida.

Answer.—This is a case where the doctor should prescribe exactly what is to be done. There is no telling what condition required the use of a tube for alimentation. It would be far better to refer back to the physician for directions.

When a person has to be fed by means of a duodenal tube it is necessary to have food which will pass through the tube readily and be easily digested. Unless there is some special digestive difficulty, milk is usually the basis of the diet. To 1 pint of milk, one may add a raw egg, well beaten, without separating whites and yolks, and 1 tablespoonful of milk sugar. This is sometimes further enriched by adding from 2 to 4 ounces of cream. Other foods or special preparations should be used under the doctor's care.

Even in the populous districts, the practice of medicine is a lonely road which winds uphill all the way, and a man may easily go astray and never reach the delectable mountains unless he early finds those shepherd guides of whom Bunyan tells, Knowledge, Experience, Watchful and Sincere.

—Osler.

Physiologic Birth Control

THE RHYTHM
Of Sterility and Fertility in Women

A Discussion of the Physiological, Practical and Ethical Aspects of the Discoveries of Drs. K. Ogino (Japan) and H. Knaus (Austria) Regarding the Periods When Conception is Impossible and When Possible.

By LEO J. LATZ, M.D., LL.D.

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Schools and Camps

Schools for Backward Children

Beverly Farm (INC.) *A Home and School for Nervous and Backward Children and Adults*

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<> TROWBRIDGE TRAINING SCHOOL <>

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Of the most absorbing importance to expectant mothers

AN ENCOURAGING AND SYMPATHETIC BOOKLET 15c

American Medical Association · Chicago

Do You Know—

1. Why prolonged colds often develop into sinusitis? *See page 878.*
2. Why only cold water should be used on the tooth-brush? *See page 919.*
3. Some new ways to serve spinach that will tempt children's appetites? *See page 908.*
4. The five qualifications needed by a good doctor? *See page 898.*
5. Why the practice of going without breakfast or lunch is to be condemned? *See page 885.*
6. What health habits the child should have established by the age of 4 years? *See page 912.*
7. Why the Age of Leisure increases the need for health education? *See page 882.*
8. What three types of deformity may result if a child walks at too young an age? *See page 896.*
9. Under what conditions the various types of baking powders should be used? *See page 928.*
10. At what ages eye examinations are especially needed? *See page 924.*
11. Why good dentists do not guarantee bridgework? *See page 891.*
12. The best way to get rid of the head louse? *See page 915.*
13. Why the handicapped child needs especially to learn to do things for himself? *See page 901.*
14. Why the American Federation of Organizations for the Hard of Hearing was formed? *See page 888.*

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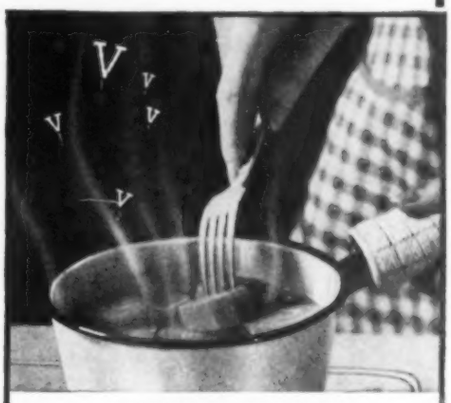

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Sixty easy-to-read modern facts and charts about your baby's diet needs. "*Modern Guardians of Your Baby's Health*" clears up the mysteries of vitamins and minerals. It has been passed by the American Medical Association, Committee on Foods.

Send, with the coupon below, the labels from 3 tins of Heinz Strained Foods. Or, instead of labels, send 10 cents.

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Because of their *absolute* purity—known to be free of harmful ingredients and irritants—Marcelle Cosmetics, face powders, face creams, rouges, lotions — are endorsed by doctors everywhere. Marcelle Cosmetics comply with the rigid standards of purity and ethics of the American Medical Association. Marcelle Cosmetics are Orris Root free and also non-allergic.

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Marcelle Face Powders, Face Creams, and Lotions are delicately scented and smartly packaged. Enjoy their fine quality and know you are giving your skin *safe* beauty.

Start today. Large sizes $1.00, medium sizes 50 cents. If your dealer cannot supply you order from us giving dealer's name.

Write for free booklet on the care of the skin and make-up chart.

*Orris root and rice starch in cosmetics bring on annoying allergic reactions—pimples, blotches, sneezing, running eyes, coughing, etc. Victims of hay fever, rose fever, etc., are warned to use *non-allergic* cosmetics. Marcelle Cosmetics do *not* contain Rice Starch or Orris Root.

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THE SCHOOL IN RELATION TO HEALTH CONDITIONS IN THE HOME

It is a common practice for teachers to think a child dull, naughty or restless when he is really the victim of bad health or health defects that could be remedied, according to an article in *Child Welfare.*

One of the most important considerations is the number of hours the child sleeps, taking into account also the number of persons, children or adults, with whom he must share his bedroom or even his bed. A child who must sleep with two brothers or sisters in one bed is not getting adequate or healthful sleep. If he is nervous, irritable or drowsy in school, his teacher should know that perhaps he is not sleeping under the proper conditions, and a talk with the mother will help her to see the importance of healthful sleep.

Or perhaps the child has colds all winter and a persistent cough. In a talk with his mother the teacher may learn that the mother accepts the fact that her child is subject to colds and that he is not provided with the right temperature, ventilation and heating at home or with warm underclothing and galoshes in snowy weather.

If a child does not have proper food, he cannot do good school work. Knowing the home conditions, the school may help by a program of adult education for parents who can afford food but who are providing the wrong kinds, by sending helpful pamphlets to those homes. The school may also furnish additional food in the nature of milk, hot soup or chocolate for those whose homes are unable to furnish all the nourishment that is needed.

Chronic disease among home members may also be a real menace to children unless every precaution is taken to shield them from dangerous contacts. Individual towels, wash cloths and bedding, the disposal of refuse and bandages, and sufficient ventilation and fresh air are important in this connection.

Knowing the needs of the children under her supervision, the teacher may better plan health lessons and health projects which will have a significant bearing on the lives of those particular children.

Safety campaigns, like fire prevention effort, must go forward 365 days in the year, with eternal vigilance at every hour of the day and night, if anything tangible is to be accomplished. Sporadic effort only emphasizes the inherent carelessness of the people.

Perfect Protection For Your Baby

While mother rests, baby sleeps safely—completely protected in a Vanta sleeper.

Made in sizes 0 to 3 with Lastex anklets insuring perfect foot fit, the garment shown here is a Self Help Sleeper with only one button and Lastex seat. The sleeper comes in other styles with or without feet.

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STERILIZED garments in layette sizes.
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FREE
"THE TODDLER"
A booklet on babies two to six years old. Address Department H 10.

DIPHTHERIA IMMUNIZATION AND INFANTILE PARALYSIS

The danger of contracting infantile paralysis seems to be less for children who have been immunized against diphtheria, according to a report from the Illinois state department of public health. This opinion is based on the results of recent epidemiologic studies as well as on the observations of experimentation in research laboratories.

One study showed that during a minor epidemic of infantile paralysis in two Illinois counties, the rate of attack was nine times greater among children who had not been immunized against diphtheria than among those of the same age group who had been immunized.

There is perhaps no direct relationship between infantile paralysis and diphtheria, but the habit and experience of the body in protecting itself against one kind of germ increases its power to combat other germs, just as a man who acquires skill in shooting quail is better able to shoot deer than the man who has had no experience with a gun.

There is nothing against which we ought to be more on our guard than, like a flock of sheep, following the crowd of those who have preceded us, going, as we do, not where we ought to go, but where men have walked before. . . . We live not according to reason, but according to mere fashion and tradition. We shall recover our sound health if only we shall separate ourselves from the herd, for the crowd of mankind stands opposed to right reason—the defender of its own evils and miseries. . . . Human history is not so well conducted that the better way is pleasing to the mass. The very fact of the approbation of the multitude is a proof of the badness of the opinion or practice. Let us ask what is best, not what is more customary; what may place us in the possession of an everlasting felicity.

—Seneca writing to Lucilius.

I have hope and wish that the nobler sort of physicians will advance their thoughts, and not employ their time wholly in the sordidness of cures; neither be honored for necessity only; but that they will become coadjutors and instruments of the divine omnipotence and clemency in prolonging and renewing the life of man.

—Bacon.

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What are its purposes?
Will it fulfill these purposes?

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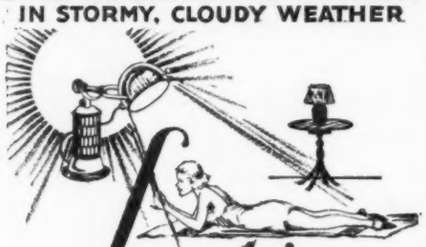

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A HOUSEWIFE LOOKS AT THE COMMITTEE ON FOODS

(Continued from page 931)

amount of moisture, either because it has not been tightly packaged or properly covered and protected in the home, appears caked and hard or contains hard lumps. Even if it is mashed and sifted, it will not give full leavening strength; it is much more economical to discard such a can of baking powder and purchase a new one to use with good flour, butter and other expensive ingredients.

In the manufacture of a high grade baking powder, many chemical tests are made on the ingredients and on the baking powder at various stages in its preparation. A well equipped chemical laboratory and a staff of thoroughly trained, experienced chemists are necessary. Each batch should be given a baking test in the factory experimental kitchen. It is important that every single spoonful of baking powder shall be of uniform quality and strength. Uniform granulation, dryness, sifting and blending are necessary. None of the ingredients or the finished product is ever touched by hand. An accepted brand of baking powder must show on the package the name of a manufacturer or distributer who is responsible for sealing within the package a product of uniform quality.

The use of an accepted brand of baking powder makes good baking results possible. However, uniform results depend on a great many additional factors. One must be careful to select a good flour, good butter or other shortening, flavoring that will not lose all of its strength during baking, and all other ingredients of high quality.

The housewife must also be careful to choose a recipe that is properly proportioned with a sufficient margin of safety. Some recipes carry an element of risk, for if a trifle too much shortening is used, the mixture will be too rich and the batter will fall during baking. Other recipes may have this same general fault in respect to some other ingredient. A really good recipe should be so well balanced that one can be a bit careless in the measurements and still get a good result. However, I do not advocate such carelessness. The recipe should be followed exactly and standard measuring cups should be used.

Quick breads offer the opportunity to introduce variety into the meals at low cost. They furnish digestible carbohydrate material. In addition to wheat flour, other foods such as corn-meal, rice flour, bran, soy bean flour and the like may be included, while some recipes call for eggs, dried fruits or nuts all of which add nutritional value. Such quick breads are suitably combined in the diet with butter, milk, fruit, vegetables and meat.

Women most often think of baking powder in connection with cake, for good home-made cake appeals to every one. Cake is richer than bread in fat, egg protein and sugar, with the corresponding nutritive value of each of these foods. Properly leavened and baked cake is easily digested. Cake is more delicate and more difficult to bake than corn bread or biscuits because the batter is thinner and contains more shortening.

All of the accepted brands of baking powder give excellent results in cakes, and they may be used interchangeably in any good cake recipe. They will produce a cake which is light, delicious, and fine in texture if the ingredients are thoroughly mixed into a homogeneous batter, if the sugar crystals are thoroughly dissolved and if the cake is baked at the proper temperature. When the temperature control on the gas or electric oven is properly adjusted, a loaf cake using 2 cupfuls of flour, baked in a pan 8 inches square, will bake satisfactorily at a temperature of 350 F.; ordinary muffin sized cup cakes bake satisfactorily at 375 F.; a large cake, or an angel or sponge cake, bakes at 325 F. As a rule, the oven should be thoroughly preheated to the designated temperature when the cake is put into the oven, although special cases may call for a cold oven. The baked product should not be removed from the oven until it is completely baked. It should be emphatically stated that baking failures attributed to baking powder are often caused by other factors such as the ingredients used, the mixing method, or the baking time and baking temperature. If one is careful to buy a brand of baking powder that has been accepted by the Committee on Foods, to protect the baking powder from moisture, and to measure it correctly, it is illogical to blame the baking powder for poor results.

Because of the difference in the amount of leavening action which baking powders produce in the cold dough, and because of the individual characteristics of baking powders, the housewife may find that one brand of baking powder gives her better results than others. She may be in the habit of getting the batter into the oven as quickly as it is mixed and may have an oven which heats quickly and is controlled so that she is sure the temperature will be right when the

A HOUSEWIFE LOOKS AT THE COMMITTEE ON FOODS

batter is mixed. Another housewife may find that telephone and small children frequently interrupt her, and that the batter may have to wait, either in the mixing bowl or in the baking pan, to be baked later. In such a case, she will choose a different brand of baking powder from that used by the first housewife.

All of the accepted brands of baking powder may be used satisfactorily in ice-box cookies or biscuits made the night before they are baked. A cake batter may be poured into the greased baking pan, covered with a double thickness of cheesecloth that has been wrung out of cold water, this in turn tightly covered with waxed paper tied in place, and the pan stored in the refrigerator until baking time. The cheesecloth and paper are removed before baking. Any dough mixed and stored before baking must be properly refrigerated.

Baking powder is useful in a number of other foods besides the usual doughs and batters. It leavens and makes more readily digestible the bread stuffing in fowl, and for the same reason it is useful in meat cakes, croquettes, mashed potatoes, meat loaf and mush. Baking powder helps to make the cell walls of eggs more firm and to leaven such egg mixtures as omelets, scrambled eggs or soufflés.

The statement that doctors, dieticians and domestic science teachers find a certain type of food superior is not a fair statement to make, because such persons and groups of persons do not carry on scientific research and because the use of the word "superior" is vague. Authoritative research of this type is carried on by scientists in universities, and reports are made in scientific publications, such as *The Journal of the American Medical Association.*

The Committee on Foods of the American Medical Association, wholly without remuneration, considers foods, food advertising and questions of nutrition solely from the standpoint of consumer welfare and health.

It has been estimated recently that the average person expends the same amount of energy in walking up an average flight of steps (15 steps 20 cm. high) as he does in walking on a level 15 times the distance represented by the vertical height of such a staircase, or as he does in descending three such flights of stairs.—*Illinois Department of Health.*

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Some call Vitamin B the "yeast vitamin" because yeast is a well-known source of Vitamin B. Yet one cent's worth of Quaker Oats contains more of this precious essential than three cakes of fresh compressed yeast.

Loss of weight, general evidence of malnutrition, may result when a child's diet is short of this essential. Kids aren't as bright, don't get along as well at school, when they are under-nourished. But, warns one scientist, this essential can't be stored up in the body. So play safe. Serve Quaker Oats regularly!

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Now youngsters poorly nourished for Vitamin B can be helped to develop wholesome, normal appetites without being coaxed to eat. Poor appetites often disappear, records show, after regular feeding of this precious food essential, supplied in Quaker Oats. It also helps improve bowel function impaired by lack of Vitamin B. Now in Quaker Oats, the economical breakfast food, every child, rich and poor, may have this splendid nourishment.

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THE EYE HAS ITS TROUBLES: OPTICAL DEFECTS

(Continued from page 927)

quate in several important respects. First, the examination comes too late in the case of those children whose eyes need looking after most urgently at an early age, notably in instances of squint, high degrees of farsightedness and incipient nearsightedness.

A second disadvantage arises because, if the child's visual acuity is normal, it is given no further attention. In reality, however, these children who have good vision, even better than normal, are liable to be working under the handicap that farsightedness imposes on them when they read, write and do other tasks close to the eyes. In this manner a condition is allowed to continue which contributes to the development of squint.

Finally, the interest of parents in this matter is not actively aroused, and the recommendation to take the child to an eye physician is, in many instances, not followed out. This is a problem that requires the attention of parents, children's specialists, health educators and health authorities at large. The eye specialist must necessarily wait on the recognition of this need before he can do his part.

It may be asked, How can the eyes of children of so early an age be examined when they cannot read and cannot with certainty indicate by any other means how much they see? The answer is that they can be satisfactorily examined with the aid of "drops" instilled in the eyes, which means that drugs known as cycloplegics are used to dilate the pupil temporarily and arrest the action of the ciliary muscle. Also gross errors of refraction, so materially injurious to the developing sight of children, can be determined with great accuracy by retinoscopy, the most reliable method of measuring the needs of the eye.

There are cases in which glasses are urgently needed by children only 2 years old or even younger. Some parents are averse to this, but they may be assured that no harm can be done and that it is the only means to aid a struggling eye to develop and save its sight.

Periodic reexamination of children who have serious optical defects and those who show a tendency toward such defects, especially in cases of nearsightedness, should subsequently be carried out once every year or even oftener.

The second routine examination of all eyes should be made at 14 years of age. It is taken for granted that care has already been given to those children who have evinced symptoms and made complaint. At the age of 14 the child is in the midst of the active period of growth, of the profound changes incident to puberty; and the eyes do not escape these changes. Eyes that have been farsighted may become less so and even change to the nearsighted type. Eyes that have been under mild constant strain are now beginning to show symptoms of distress under the pressure of greater educational requirements and the demands of general reading. The intelligent cooperation of the child may now be enlisted, so that subjective tests, too, may be made.

If a material error of refraction or adverse developmental tendencies are found, subsequent examination at certain periods is necessary. In this connection it may not be amiss to quote from a report made in 1929 by the U. S. Public Health Service in "A Special Study of the Vision of School Children." The report says:

"The conservation of vision is of vital importance in the development and progress of modern man. . . . Both nearsighted and farsighted eyes are defective eyes and need correction. . . .

"Many hyperopic eyes are able to overcome the optical defect by the power of accommodation. When this is overdone, the symptoms of eye strain arise. With continued near use of the eyes the print or near work becomes blurred, the eyes water, and headache may occur, especially toward the end of the day. These symptoms may become so aggravated that to do near work is very uncomfortable and the child, therefore, does not like school work.

"The number of children with normal vision, or emmetropia, is very small, being only 3.4 per cent.

"The most frequent visual defect is simple hyperopia, which reaches 63 per cent. Myopia has not reached alarming proportions . . . being 5.5 per cent. . . .

"The rate of change is very marked in myopia between 7 and 12 years of age. . . . The proportion of children with myopia is four or five times as great among children 12 to 16 years as among children 6 to 7 years of age. This shows the necessity for careful observation of the vision of school children between the seventh and twelfth years to find the cases of myopia before the condition has advanced."

Astigmatism has been found in 28 per cent of the children examined. "Strains of varying amounts are present which may become

THE EYE HAS ITS TROUBLES: OPTICAL DEFECTS

worse as the child advances in its school course. The individual goes out into the commercial world much handicapped, due to the effects of visual defects. . . .

"Small errors of astigmatism are very difficult at times to discover, and a cycloplegic (the use of 'drops') is necessary. In such cases very little strain is present, but it may be of a nature to make one tire easily, or cause severe and constant headaches. Small errors are more difficult to discover than larger ones. An eye which has been given the wrong glass will accept it for a while, but soon will tire again and headache will recur. When a cycloplegic is used, the astigmatism is more readily found, and its proper correction will give absolute relief.

"Any child with symptoms of eyestrain should be sent to an eye physician for careful examination even if the naked eye reads 20/20 on the Snellen chart. This is just as important as having the teeth examined for presence of cavities, or the nose or throat examined to determine the presence of enlarged tonsils or adenoids. If informed, after a careful examination with a cycloplegic, that the vision is normal and that no disease exists, the general feeling of satisfaction experienced is well worth the effort. If some defect is found, it does not necessarily mean glasses; but certainly such a child should be observed from time to time, so that an accurate check can be kept on the progress of such a defect. Children may not complain of symptoms until the defect is far advanced, and then much valuable time has been lost. If glasses are necessary for a child and are worn as directed, in many cases they can later be discarded. Even then an occasional visit should be made to the eye physician. . . .

"The results of this study emphasize the necessity for regular annual examinations of eyes which are known to be defective. Also it is important to look for defects in the supposedly normal eye, for this study has shown that many eyes thought to be normal are far from being such."

The beginning of the bread-winning period calls for another general eye examination. The eyes are now subjected to new and prolonged strain varying with the particular occupation or pursuits and with the immediate working environment. Various types of eyes are called on to adjust themselves to the same tasks. Often grave problems are created as to choice of occupation versus the future health of the eye and welfare of the person. Only a thorough examination and the best professional advice can avert many tragedies that lurk in the offing.

Forty-five is the age of vital change in the body as a whole, and of vital and decided changes in the eyes. It announces the oncoming of middle age, a change in tone and tempo and pace of all the functions. At this age, the eye directly needs attention and help. The world begins to move away from the eyes a little. Reading, sewing or any other fine work close to the eyes becomes difficult or impossible. The help of glasses is needed in this great vital readjustment.

At this age, too, an examination of the eyes often shows evidence of disease and weak spots elsewhere in the body. At this period the eye is a mirror before which pass many vital events whose shadows are cast before them; the eye is full of significant hints for the maintenance of health and the prolongation of life. Reexamination every two years for near adjustment is necessary to maintain comfortable sight.

The remedy for optical shortcomings is the use of glasses prescribed after a thorough, scientific examination and guided by long and discerning experience. This leads to a discussion of the many phases in the use of glasses; this subject will be taken up in the next chapter.

Meanwhile, let it not be forgotten that all eye difficulties due to defective structural and functional conditions, usually designated as errors of refraction, can be remedied and should be attended to at the earliest possible time.

This matter involves one's eyesight, one's comfort, good health and good sense, a duty toward one's self and one's dependents.

CHANGING VALUES

Life was more than a race
In the days of fenced-in yards:
Then home was a family place
That was hedged with love that guards.

—*Augusta Moore Gibble.*

Physical examinations once annually, the adjustment of habits of work and play to fit the ability of the heart to function, the prevention of communicable diseases and the proper medical care of the sick are the methods by which a great deal of heart impairment can be prevented or controlled.

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PLEASE MENTION HYGEIA WHEN WRITING ADVERTISERS

AMBROSE O'PSHAW, DETECTIVE

(Continued from page 935)

heartily of the good supper I gave him. I served just the things he liked best, as I wanted to celebrate. And then, almost as soon as supper was done, he dropped off to sleep and could no more than grunt when I tried to awaken him. Oh dear, oh dear! I managed to get him into his bed, and this morning I awakened him by putting cold water on his face. He ate four slices of French toast, several slices of bacon and three fried eggs, and took two cups of coffee for his breakfast. How thankful I am that he has retained his appetite! When that is gone, I shall know that my boy's condition is dangerous!"

"What did he do after breakfast?" the detective inquired.

"He wandered idly about for a few minutes, and then he went into the orchard and stretched out in the shade. There he still is."

"I shall begin thinking on his case all over again," Ambrose said sternly. "He is my first, and I'm determined that he shall be cured."

The widow excused herself and went into the kitchen. In a short time tantalizing odors came from that direction, and the pots and pans made a merry clatter. When she came back again, her cheeks were rosy from heat. She and the detective took a pitcher of cold water and went to rouse the sleeping fellow in the orchard. He sputtered and grumbled when they splashed the water into his face, but he dragged himself into the dining room, yawning widely and rubbing his eyes.

It would take entirely too much time to name all the good things the widow had provided for luncheon. There is time, however, for me to say that she had first prepared everything she could think of; then she sat on a chair and thought of something else; and after that was prepared, she thought again, and by this method she provided a great variety of foods. The detective loosened his belt several times during the meal, and Henry's head had almost dropped to the table before the dessert was served. The widow was so busy serving the meal that she couldn't eat much, but she seemed proud and happy.

As the detective started away from the Merrywell home, he stood and stared at Henry, asleep among the pigs, and almost wished that he might join him .

"It is a hot and tiring day," he said. "I feel quite fatigued myself. I shall come back to solve his case some time when it is cooler. Oh pshaw! I wish I were home!" He left the orchard and moved wearily toward home.

Many times he went to the Merrywell home. Henry's case did not improve, but the widow was confident that Ambrose could solve the trouble if he was given plenty of time. Ambrose felt confident also as he went to the house, for surely each new day would bring forth a new idea. The widow treated him like an honored guest, always serving delightful refreshments of some sort, and they would talk solemnly together of possible remedies. But as the day wore on, Ambrose would begin to feel heavy and stupid, and he would resolve to come back another day when he felt better.

Then, one fine morning, he fell on the solution of the trouble quite by accident. He had been laughing at the sprightly antics of a toad which leapt about in the grass near Ambrose's door, catching insects for breakfast. Ambrose helped him by stirring the grass with a stick, and the toad would catch the leaping insects by a lightning motion. Then the toad began to be slow in its movements and finally sat in the sun, motionless. When the lazy fellow was poked by the stick, he jumped sluggishly a little way and then settled down for a nap.

Ambrose stared at the toad. It reminded him of something. He rubbed his chin thoughtfully. What—?

All at once the detective's eyes became bigger and rounder than ever. With a loud whoop he galloped down the road toward the widow's house without waiting for his hat.

"I've solved our trouble!" he shouted to that surprised lady, who was hanging out the clothes in the garden. "I've been wishing for a remedy; but I believe I've found the cause, which will serve much better!"

"What is it, what is it?" she gasped.

"You pour cold water on your son until he is awake," the detective said mysteriously. "Then stay here with him. When you hear me call, bring him into the house, and I shall show the criminals to you at once."

"Criminals!" she screamed. "Do you mean robbers and—"

"These criminals are worse than robbers," he said solemnly. "Now, do as I have directed."

The widow pulled her drowsy eyed son into the house when the detective's voice rang out some time later. Ambrose was standing in the dining room, looking calm and serious. A white cloth covered something large and bumpy on the

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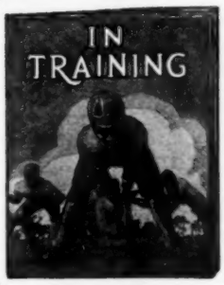

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535 North Dearborn Street Chicago

table. Ambrose motioned for the widow and her son to be seated, and even Henry looked interested when Ambrose flourished his hands over the table and flipped away the white cloth.

The widow gasped. The top of the table was covered with frying pans, sauce pans, pie pans, kettles, roasters, cake boxes, doughnut jars and a large coffee pot.

"These are the criminals," said Mr. O'Pshaw solemnly. "They have loaded your son with so much rich food that he has become stupid and lazy. While you were poor, they could not harm him; but as you became richer, they became more wicked, for you had more to put in them. They could not harm you because you spent more time serving than eating. Their poison was slowly destroying your son, for only his excellent health had warded off the serious illnesses they carry. In time, however, his health would disappear, and then his poor tired body would be quite unable to fight them. My own experiences and observations have proved these objects on the table to be guilty; and so," Ambrose cleared his throat importantly, "I do hereby sentence half the kettles and sauce pans, all the frying pans, all the pie pans except one for holidays, the cake box, the doughnut jars and the coffee pot to the attic for a term of twenty years." The detective's breath was quite gone after his long speech.

"Oh, no! Oh, no!" objected the widow. "I cannot let you sentence my fine utensils to the attic!"

"Then they will sentence your son to long naps in the orchard until his health and also his pride and ambition are gone!" snapped Ambrose. "You may take your choice. I bid you good day!"

He strode from the house as if quite angry, but he began to whistle before he had gone far. He felt certain that the widow would make up her mind to sentence her cooking utensils rather than her son.

When he neared his own house, he broke into a run, for some one was pounding on his door.

"Customers!" he thought, and he ran faster.

(To be continued)

Men and women do not grow into adult success out of childish unsuccess. The child is in very truth father to the man. If we desire, as we do, to equip our children for a successful and happy life, we must realize the importance of making them successful and happy now, at the age of 2 or 6 or 14.

—*Aida de Costa Breckenridge.*

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FAULTY HEALTH HABITS HARM AVERAGE STUDENT

Are students in preparatory schools and colleges physically unfit? W. R. P. Emerson of Tufts College Medical School in Boston has made extensive study of this subject. His observations are discussed in an editorial in *The Journal of the American Medical Association.* A part of the editorial follows:

"There may be considerable debate as to the serious rôle assigned to what are called faulty health habits. In Emerson's judgment, the four leading faulty health habits for each college class, with a single exception, were no rest periods, fast eating, irregular bedtime and the habit of having no regular time for bowel movement. Emerson's study of the health of students in eight representative high schools and seven leading private schools shows conditions of physical unfitness closely approximating that found among students entering college. . . .

"Such incriminations call for earnest consideration. The American school and college boy need not become the victim of hygienic indifference, if the current indictments are tenable. Part of the responsibility is placed on the shoulders of medicine. The chief obstacle to health work, Emerson claims, is the persistent idea that if a person is not sick he is well, which prevents the physician from entering the field of health in the same scientific spirit in which he meets the problems of disease. Because of the failure of present health programs as indicated by the extent of physical unfitness, the plea is made that medical training should be as efficient in the diagnosis of health as in that of disease. The physician, Emerson concludes, should become the leader and not the follower of lay workers in the field of health. He should become as much an authority in health as in disease. The technical part of physical fitness work, Emerson adds, is largely educational, but its supervision requires efficient training, which thus far has been given little place in medical teaching."

"Anguish of mind has driven thousands to suicide; anguish of body, none. This proves that the health of the mind is of far more consequence to our happiness than the health of the body, although both are deserving of much more attention than either of them receives."—*Colton.*

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NEW ZEALAND LEADS ALL NATIONS IN AVERAGE LONGEVITY

The record for average longevity among all nations is held by the island state of New Zealand. The male infant born there can expect to reach the age of 65 years, and the female nearly 68 years.

The mortality in the first year of life among the white population of New Zealand is only 38.35 per 1,000 for males and 25.48 for females. The corresponding figures for the white population of the United States in 1930 are 60.86 and 48.21, according to the *Statistical Bulletin* of the Metropolitan Life Insurance Company. Perhaps nothing testifies more eloquently to the excellent health management in New Zealand than this low mortality among babies, for at that stage of life everything depends on proper care of the mother and child.

Infant mortality is at best a high figure. On the other hand, toward the late period of life, when mortality again mounts to high figures, the causes of death belong increasingly to a class against which there is less efficient means of defense than those which have been brought to bear so successfully on mortality from infectious diseases and the principal diseases of early infancy. In view of these facts, and as the result of a hypothetical life table constructed on the basis of estimates the people of the United States may reasonably hope to achieve, the conclusion has been drawn that this country cannot expect in the near future materially to surpass the average already achieved in New Zealand.

As compared with the actual experience in the United States from 1929 to 1931, the white male population still has about ten and one-half years to gain before reaching the ideal of the estimate. The female population needs to add only seven years to its score of 1930. There is much encouragement in working toward this ideal from the fact that since the beginning of the current century there has been scored a gain of 10.86 years in the expectancy of life of white males and of 11.54 years in that of white females.

"It is not a vain hope," the *Bulletin* says, "that the American people, with all their advantages of rich natural resources and favorable climate, their widespread education and excellent medical and public health services, will win for themselves the average longevity called for by the conservative estimate of the hypothetical life table, an average only slightly better than what the New Zealanders have already achieved."

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PROBLEM OF DEAFENED PRESCHOOL CHILD IS IMPORTANT

Although recognition of the problem of the deafened preschool child is relatively recent, it is of great importance. The average case of chronic deafness in the adult presents one of the most discouraging conditions that come to the otologist; examination often shows that the time for corrective measures has passed. The great hope lies, therefore, in prevention, or at least the early correction, of etiologic defects.

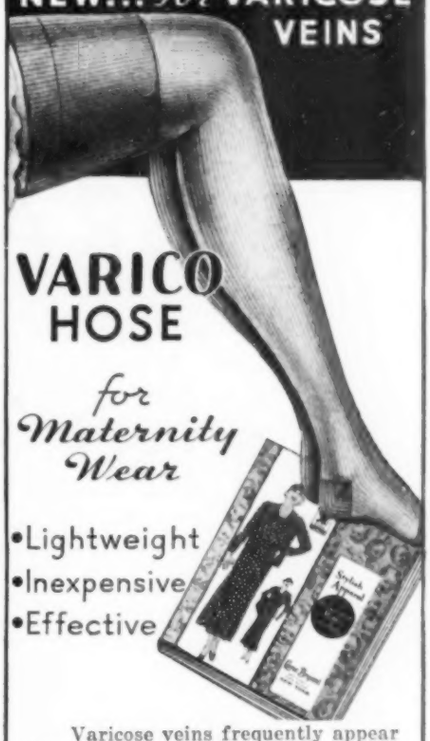
It is difficult to ascertain the number of deafened children of school age, but it has been estimated to be about 3 million in this country. The deafened child suffers greatly. Because he cannot hear he is thought inattentive, uncooperative, backward and even mentally deficient. He becomes self centered, appears stubborn and unsocial. If the child's elders are unaware of his hearing defect so that no attempt is made to assist him in his social adjustment, he will carry his unhappy mental state throughout life, for even if his hearing is improved later on, the mental condition will often remain unchanged. For these reasons also a hard of hearing child must be kept from association and schooling with totally deaf children. The depression from such contact is great, and furthermore the hard of hearing child will learn to imitate the imperfect diction of the deaf child.

An article in *Child Health Bulletin* lists the following important points that need to be emphasized in connection with this problem:

1. Early detection of deafness by parent and family doctor.
2. Eugenical marriages (medical advice to adults with certain types of deafness concerning marriage).
3. Immediate treatment of ear complications, and periodic hearing tests, following acute contagious disease.
4. Removal of foci of infection in incipient impairment of hearing.
5. Social adjustment of the deafened child.
6. Public propaganda on the problem of deafness in children.
7. Establishment of prevention of deafness clinics in each section of a city, in a responsible hospital and under the direction of the municipal board of health, enabling each case of contagious disease to have at least a follow-up ear examination, hearing test and immediate treatment when necessary.

The chains of habit are generally too small to be felt till they are too strong to be broken.—*Johnson.*

NEW... for VARICOSE VEINS



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